­

DISRUPTIVE INNOVATION, CHRISTIAN HIGHER EDUCATION AND THE POOR

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A FINAL PROJECT SUBMITTED TO

THE FACULTY IN CANDIDACY FOR THE DEGREE

OF DOCTOR OF TRANSFORMATIONAL LEADERSHIP

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…from Issachar, men who understood the times and knew what Israel should do…   
- 1 Chronicles 12:32

God grant me the serenity to accept the things I cannot change; courage to change the things I can; and wisdom to know the difference.

* The Serenity Prayer, Reinhold Niebuhr

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# Abstract

This study examines the prospect of disruptive innovation in higher education and its implications both for Christian higher education and the poor. Two major trends are likely to shape whether Christian higher education will play a larger or smaller role in the global higher education system. One will be the trend toward consolidation as global technology courseware platforms begin to dominate higher education. This courseware trend could result in an increasing role for Christian higher education as a larger portion of global higher education becomes private, but it could also increase secularization if Christians do not effectively use these platforms. The other trend is the growth of higher education outside the Western world, which could increase or decrease the role of Christian higher education depending on how Christians respond.

There are also two major forces affecting whether the poor will be helped or hurt by the coming changes. The trend toward automation could create significant long-term technological unemployment among the poor who lack access to higher education. The trend toward massification of higher education accelerated by disruptive innovation could potentially help the poor by providing accessible, less expensive access to education. Whether the net effect of these two trends is to help or hurt the poor will ultimately depend on whether society is are able to more quickly educate the poor for new jobs than we eliminate jobs through automation.

One key conclusion to this project is that technology leadership will be critical to increasing the future influence of Christian higher education and benefitting the poor in the midst of these changes. Because of the importance of technology leadership, the second part of the project presents research toward a Master’s program in Technology and Ministry to train practitioners in these leadership principles.

# Chapter 1: Introduction

## Statement of the Problem

There is a growing consensus that online education has the potential to be a disruptive innovation in higher education (C. Christensen, Johnson, & Horn, 2010). This study examines the prospect of disruptive innovation in higher education and its implications both for Christian higher education and the poor. The first part of this paper examines how Christians can effectively lead in response to disruptive innovation in higher education and how it can be used to serve the poor. The second part of this paper presents general leadership principles for Christian technology leaders. It then outlines the steps of developing a Master’s in Technology and Ministry (MTM) and present a proposal of this new degree to train Christian technology leaders.

## Statement of the Purpose

Part 1 of this project examines principles of how to lead an organization in utilizing disruptive innovation in Christian higher education to serve the poor, organized as follows.

* Chapter 3 provides a historical/theological/social analysis of the context for this project.
* Chapter 4 presents technology leadership principles for Christian higher education.
* Chapter 5 examines the unique role and opportunity for Christian higher education in the face of disruptive innovation

Part 2 of this project presents research and a proposal of how to effectively design such a Master’s program for technology and ministry leaders, organized as follows.

* Chapter 6 presents the conclusion from part 1 of the project: an organization seeking to lead in disruptive higher education must become a learning community of Christian technology leaders. This chapter provides technology leadership principles for Christian organizations in general.
* Chapter 7 then outlines the steps in developing a Master’s in Technology and Ministry (MTM). Finally, this section presents the proposal for the MTM program.

## Definitions of Key Words and Terms

*Disruptive Innovation* “describes a process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors” (Christensen, Clayton, n.d.)

*Christian Higher Education* is post-secondary education conducted by Christian institutions with some degree of credentialing. The definition for higher education used in this paper is closer to the term *tertiary education,* which includes non-academic forms of post-secondary education such as technical training institutes, vocational training, and continuing education as long as there is some form of credentialing happening.

The term *technology*includes all “tools, machines, utensils, weapons, instruments, housing, clothing, communicating and transporting devices and the skills by which we produce and use them” (Bain, 1937).

The use of the term *the poor* is not intended to be a precise definition (for reasons described below), but is more generally applied to a people group with the lower status in any given society. Any term used to describe the poor often picks up negative connotations because the poor is a group that is typically oppressed, and that oppression turns any term used to describe the poor into a pejorative. There are trade-offs of using terms like *at-risk* or *vulnerable* that might have less negative connotations but at the same time tend to not be terms used by the poor themselves. A good attempt of Gandhi to redefine the poor with positive connotations is his use of the term *Harijans* with the meaning “child of God” as a description of the untouchables in India (“Harijan,” 2015). There is no comparable word in common use in English, so *the poor* is the best the English language has, I think. There is a priority to using language that allows a group to self-define. Based on that, the poor most typically call themselves *poor*, which is why I use the term.

## Audience

There are several intended audiences of this project. At the broad level, the audience is intended to be primarily Christian. There will be several delivery formats for the various audiences including the dissertation format, a degree proposal to City Vision’s accreditation agency, Distance Education Training Council (DETC), and online courses for students. The audiences include

* TechMission/City Vision staff, board and partners.
* City Vision Masters in Technology and Ministry (MTM) Students.
* Distance Education Training Council (DETC).
* BGU staff and faculty.
* Leaders in technology and ministry.
* Leaders in Christian higher education
* Christian leaders
* Secular leaders in higher education with an interest in disruptive innovation

## Stakeholders

The stakeholders include the above list. They also include

* The U.S. Department of Education
* State departments of higher education
* Churches, ministries and businesses serving as employers of our students
* Secular tech philanthropic organizations and open education providers
* Christian media

## Scope and Limitations

The primary focus of this project is to develop a Master’s program in Science, Technology, Society, and Ministry. The project also presents research on the context of this project historically, theologically, and in terms of disruptive innovation in higher education.

# Chapter 2: Project Design and Research Methodology

## Research Methods for Gathering Data

This project employs a variety of methods for gathering data which include:

* **Research on Context of the Project** includes key books and literature to provide context to the topic of leading Christian higher education in using disruptive innovation to serve the poor.
* **Qualitative Multiple-Case Study Method.** This project collected and made extensive use of multiple case studies of other industries experiencing disruptive innovation to apply toward disruptive innovation in Christian higher education (Baxter & Jack, 2008). This project will use the cases and apply principles from disruptive innovation theory (C. M. Christensen, 2011). This project will then use scenario planning to inform strategy of institutions of Christian higher education (Chermack, 2011).
* **Comparable Master’s programs and courses.** This project includes data on comparable Master’s programs and compare the courses and program objectives. The project also collects the syllabi and course objectives for comparable courses.
* **Consultants.** This project employs John Edmiston, Jay Gary, and Fletcher Tink to develop courses for the Master’s program. Jay Gary also provided advice on overall program design. I have written the specifications, managed the project, and modified the courses developed by the consultants.
* **Interviews.** I interviewed many experts in the field including potential employers, academics in the field, leaders in technology and ministry, partners, staff, potential students, and advisory board. I also attended conferences in related topics to gain a better understanding of related domains.
* **Survey.** I sent out information about our Master’s program and conducted a survey to the leaders listed above and collected results. The purpose was to gather feedback from academics, practitioners, and other stakeholders on what is needed in our degree program. Some of the questions included
  + How would you change the program objectives?
  + Do you believe that we have identified the right target market?
  + How well do you believe that this program would meet this need prepare people to serve in a tech position in Christian ministries?
  + How well would this program prepare people to serve in tech positions in your organization?
* **Feedback from Accreditors, Peer Reviewer, and Missouri Department of Higher Education.** A part of our accreditation process for the Master’s program was to get feedback from these key parties. This feedback was incorporated into the design.
* **Research on courses covered in the Master’s program** involved reading many books and articles to identify the materials to use in courses for the Master’s program. The topics to be covered are highlighted in the literature review.

## Intervention Strategies

There are two primary intervention strategies. The strategy for Part 1 is to publish a revision of the material from chapters 3-6 as a book on Disruptive Innovation in Christian Higher Education as well as presenting the materials in multiple contexts. The main intervention strategy for Part 2 was to develop and implement an accredited Master’s program in Science, Technology, Society and Ministry (MTM).

## Evaluation Methods

Being an institution of higher education, we follow a fairly formal outcomes assessment process called the Institutional Effectiveness Paradigm and the Five-Column Model from *A Road Map for Improvement of Student Learning and Support Services through Assessment* (Nichols & Nichols, 2005).

Column 1. City Vision Mission Statement: to develop a community and a technology and educational platform to equip Christians to transform at-risk communities in Jesus’ name.

Column 2. MTM Goal: to provide practical graduate education to Christians from the Science, Technology, Engineering and Math (STEM) fields to use their skills in ministry and business to bring transformation to the world.

Column 3. MTM Program Level Outcomes (PLOs). Each of our courses has Course Level Outcomes (CLOs) that support the PLOs as mapped in our assessment plan. Our program level outcomes are listed in chapter 5.

Column 4. Evaluation. We will evaluate success based on the scores of students in their final projects and capstone course as well as job placement rates.

Column 5. Use of Results. We will then use the results of this assessment process to feed into our strategic planning process.

A complete review of the outcomes and assessment plan is included in the assessment plan chapter of the dissertation.

# Chapter 3: Context for Technology Leadership in Disruptive Innovation in Christian Higher Education

## Personal Context

In innovation circles, people often quote Amara’s law: “We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run” (“Roy Amara,” 2014). Eighteen years ago, in 1996, I co-founded a research group with David Clark, one of the fathers of the Internet, called the Internet Telephony Consortium. It was an interdisciplinary research group that primarily looked at the disruptive innovation of Internet Telephony or Voice/Video over Internet Protocol (VoIP). I am a visionary. Part of my gift was being able to fairly accurately envision what the future of VoIP would be. We predicted that VoIP and mobile would mean the “death of long distance.” It was clear to us that Vonage, Skype, magicJack, VoIP from mobiles, and many other technologies would soon disrupt the telecommunication carriers. About five years after we made these predictions, everyone was laughing about how all those predictions were not true.

Now it is 2014—18 years after we made those predictions. As I write this I am in Jamaica taking a doctoral class with Bakke University on Transformational Leadership in 2014. I have just read an article from Harvard Business Review titled “The End of the Line for the Analog Phone Network” (Downes, 2014). The article discussed how disruptive innovation in the phone system has led the FCC to begin the process of decommissioning the analog phone system because they estimate that fewer than 20% of households have landline phones. Even the direst predictions 18 years ago would not have anticipated that the decommissioning of the phone system would already be happening in 2014.

As I write this dissertation, we have no running water where we are staying in Jamaica because of a water shortage. We have wireless Internet access so I am able to Skype video conference with my two sons every night. When my wife was about to “lose it” after getting no sleep, I told her to put on a movie while she slept and I would watch our 3-year-old and 5-year-old sons for two hours while she took a nap. As visionary as I was in 1996, not in my wildest dreams did I image that I would be using VoIP on my mobile phone in Jamaica to watch my children remotely so my wife could sleep in 2014. I think Roy Amara was on to something.

Now we are at the same point in the disruptive innovation cycle in higher education as we were with VoIP in 1996. Clayton Christensen, Harvard Business School professor and the world’s foremost authority on disruptive innovation, is now predicting, “In 15 years from now half of US universities may be in bankruptcy” (C. Christensen, 2013). Christensen’s prediction that should keep every university president up at night. Unfortunately, we are still in the early stage of Amara’s law. Many people are expecting rapid transformation in the next five years, and there will be plenty of evidence that the predictions like Christensen’s are unlikely to be true five years from now. I personally believe that Christensen’s prediction is too aggressive because it will most likely take 20 to 30 years given the market entrenchment and assets of many universities. I also think that his prediction assumes that most universities are not able to make dramatic shifts needed to adapt to changing market conditions.

After Christensen made such a dire prediction he said, “…in the end I’m excited to see that happen. So pray for Harvard Business School if you wouldn’t mind” (C. Christensen, 2013). I too am excited to see disruption in higher education because it will mean the education of more people more effectively. What I am even more excited about is the possibilities that disruption in higher education has for the poor.

I learned the value of an education first hand. I grew up fairly poor. In high school I made $5 per hour at a Burger King restaurant that served as a haven to drug dealers who dealt out of the restaurant. Six years later, after an education at Missouri University of Science and Technology and the Massachusetts Institute of Technology (MIT), I was making $200 per hour as a consultant in my first job after college. I consulted to VoIP startups, venture capitalists, and at Sprint with their Internet Telephony group. At Sprint, we were the “voice in the wilderness” telling them that their billion dollar investment in Asynchronous Transfer Mode (ATM) technology was about to be made obsolete by IP technology (which it was).

In 2002, I quit my job as a consultant, and took about a 90% pay cut to found the Christian nonprofit organization, TechMission, to use technology to equip Christians to serve the poor. TechMission’s first program was the Association of Christian Community Computer Centers (AC4). AC4 was focused on addressing the “digital divide,” which is the gap between those who have access to and training with technology and those who do not. Part of what we learned at TechMission from AC4 was that computer centers were the innovators and early adopters in using technology disruption to educate the poor. We realized that the digital divide was only one part of a much larger educational divide that is driving most inequality.

Now, the market for technology educating the poor is entering a second stage. As predicted by Geoffrey Moore, most of the nonprofits involved in addressing the digital divide did not succeed in “Crossing the Chasm,” which is the term he used to make the transition between the early adopters and mainstream (Moore, 1991). Now there are new waves of for-profits and nonprofits that are attempting to bring educational access to the poor into the mainstream. This movement realizes that the digital divide is just one part of a larger “knowledge divide” between the rich and the poor. The two streams of this next wave are the Open Education movement and Massively Open Online Courses (MOOCs). TechMission was an early pioneer in this space providing over 150,000 free educational resources on our website UrbanMinistry.org. In 2008, UrbanMinistry.org became the third most visited website among Christian organizations serving the poor (“Top Urban Ministry Speakers, Websites, and Blogs of 2008 | City Vision College,” n.d.). Salvation Army and World Vision held the number 1 and 2 slots, only they did so with more than 1,000 times the budget TechMission had.

Our experiment with free resources taught us what the MOOCs are only now learning: if an organization gives things away for free, most people will only spend a little time to check it out but very few will dig in a deeper way to master material. Based on the need to provide more in depth online education, we acquired an online college that we renamed City Vision College. The college was originally called Rescue College and was started as the education arm of the Association of Gospel Rescue Missions. City Vision started very small with only one Bachelor’s degree program focused on training Urban Missions (accredited by the Distance Education Training Council). It has since grown by an average of 20-30% per year, and now has added Bachelor’s in Addiction Studies and Nonprofit Management as well as a Master’s in Technology and Ministry.

Seeing the opportunity for disruptive innovation in higher education, I am reminded of the first time I encountered the World Wide Web. The first time I saw the World Wide Web was in a computer lab in 1993 at 3:00 in the afternoon. I was so amazed that I spent the next twelve hours browsing the Whole Earth Catalog (the predecessor to Google) until 3:00 in the morning, forgetting to eat or sleep until I could not find another website that I had not visited. I do not know if I browsed quite the whole Web in that 12 hours, but I came pretty close. I realized immediately that the Web would change the world. I completely changed my undergraduate focus and made the Internet at the center of everything I did. I was student body president then, so I had the opportunity to present the Web for the first time to the University of Missouri Board of Curators. I was trying to convince them that it would change the world. At the time, I think they were mainly entertained by me, seeing that this techie student was so excited by technology. In the end, the Internet did change the world more than anyone could have imagined at that point.

Now that I see that society is on the cusp of a major disruption in higher education, I believe that this will change the world in ways beyond our imagination. I am writing this to get in front of university leaders again and tell them that change is coming. I believe this change has the potential to transform our world. This change presents tremendous potential and risk for Christian colleges and universities.

On the negative side, schools could face a future with forces of consolidation similar to what Christian publishers and bookstores faced in a world dominated by Amazon.com. Faculty could face a future that live musicians faced with the phonograph or what journalism faced when the Internet commoditized most news. On the positive side, we could create a world approaching universal higher education where the majority of those without access to higher education suddenly have access. We could create a world where Christians are able to reverse the trend of the secularization of the educational system and empower millions of parents, churches, parachurches and other groups to provide an affordable, high-quality educational experience.

I believe which future we face will be dependent on the ability of Christian colleges and organizations to innovate and excel. It is common in history for Christian organizations is to try to be best in the world, they become secularized. That is a summary of most of the history of higher education in America (Holmes, 1987). There are some sectors where Christians have become the best in the world and not secularized. One of the best examples of this is World Vision, which has become the largest and most effective global relief organization in the world. They have done that primarily by innovating and excelling at what they do.

The disruptive innovation in higher education is going to bring an earthquake to existing institutions. My hope is that Christian colleges and universities will be well prepared for this earthquake so that after the dust settles, they will emerge as many of the leaders in the landscape of higher education.

## Context within BGU Values

### Relation to Ray Bakke’s Theological Model

Figure 1. Theological model

The Figure 1 shows how we fit into the theological model of Ray Bakke. The primary difference from Bakke’s model is that our context blends the Christian justice context and the Christian technology context. TechMission’s values are Jesus, Justice, and Technology (Figure 2). TechMission blends the Christian-justice context with the Christian-tech context. There is a wealth of theology, literature, history, and tradition for how Christians relate to technology. The summary of what TechMission does is *educating* and *connecting* Christians with the poor. TechMission has three programs: City Vision (educating), ChristianVolunteering.org (connecting) and City Vision Internships (connecting). This paper will focus on higher education (City Vision) as a particular domain of the Justice-Tech context.

**Experience**

The first section is focused on the problem that is one of the most significant driving factors of increased inequality—technological unemployment from automation. The solution to technological unemployment is to provide more education, but the challenge is that the costs of education are increasing. The second section gives examples of the opportunity presented by disruptive innovation in higher education. The goal of the first two sections will be to provide context to the primary focus of this paper, which is to answer the question of what technology-empowered transformational leadership in higher education looks like.

Figure 2. TechMission's Values

### Relation to Eight Perspectives of Transformational Leadership

We incorporate Bakke University’s eight perspectives in transformational leadership throughout our organization (“BGU’s Eight Perspectives - Leadership Definitions | Bakke Graduate University,” n.d.). This section will look at how TechMission, City Vision and our Master’s in Technology and Ministry fit within these eight perspectives.

**Calling-Based Leadership.** The world is being changed more than ever by technology. We believe that those who are called to technology-related fields will have a special role in responding to this change. The primary purpose of our Master’s program will be to affirm the calling of these technologists and equip them for ministry using their gifts. In our Master’s program this affirmation of calling is instilled in our Theology of Work in the STEM Professions course.

**Incarnational Leadership.** There is the justice aspect of incarnational leadership where our strategies are primarily to enable business models that will raise up indigenous leaders as well as training majority culture leaders to be bicultural with low-income communities. The technology aspect of incarnational leadership is that we believe to serve and lead techies and digital natives, Christian leaders must immerse themselves in the culture of techies and digital natives. In our Master’s program the value on incarnational leadership is instilled in our Technology, Cross-Cultural Ministry and the Poor course.

**Reflective Leadership.** TechMission integrates this value primarily through our emphasis on recovery as a key aspect of experiencing the Gospel. All staff or interns at our headquarters are immersed in the recovery culture at TechMission and often consider it the main benefit of working at TechMission. In our Master’s program, this is the value of reflective leadership is instilled by our Theology of Technology course.

**Servant Leadership.** Often techies serve in the background. At TechMission we have enabled thousands of at-risk youth to be served and placed thousands of volunteers, but very few people receiving the end benefits know that the resources come from us. Internally, as an organization our philosophy is that everyone in the organization needs to be ministered to by TechMission for the organization to be successful.

**Contextual Leadership.** In our training on core values, we explain that technology should always be in the background. We first start with the needs and resources of the community, and then determine how technology can assist those needs rather than starting with technology first. In our Master’s program the value of contextual leadership is met by our Technology, Cross-Cultural Ministry and the Poor course course.

**Global Leadership.** Our whole strategy as an organization is to use technology to empower the poor both within the United States and globally. We see that the largest long-term impact will be global, and currently about one-third of our online traffic is international. In our Master’s program this value comes out in our Appropriate Technology course.

**Shalom Leadership.** The summary of TechMission is that we try to bridge resourced and under-resourced communities using technology. A key part of the values of our organization is reconciliation across race, class, and gender.

**Prophetic Leadership.** We use technology to promote the “long tail” of under-represented voices. We have done that through providing 150,000 free resources on UrbanMinistry.org including most of the talks at CCDA and other urban ministry conferences. Our goal is to use technology to amplify the prophetic voice for justice online.

### Comparing Core Values and Competencies of City Vision and BGU

TechMission’s values are Jesus, Justice, and Technology. Comparatively, at the broadest level it could be argued that BGU’s core values are Jesus, Justice, and Global Relational Networking. In partnering with BGU, the most common response of BGU staff to strategic suggestions from TechMission has been “that would not fit our relational values.” My conclusion is that both organizations should continue to maintain their core values while trying to learn from the other. The likely outcome of this is that TechMission/City Vision is likely to develop a lower cost structure than BGU, but with less of a relational component. How that plays out in the market remains to be seen.

## Social and Theological Context and Literature Review

### From the Rural Agricultural to Urban Industrial to the Virtual Information Age

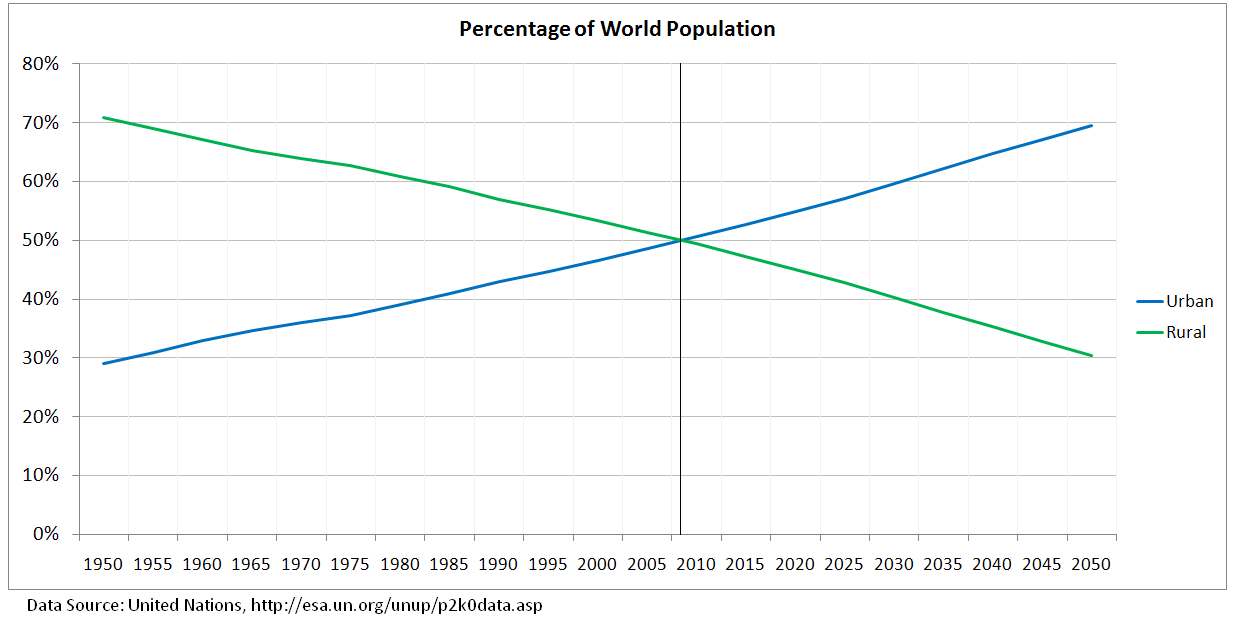
A central aspect in the metanarrative of both the theology of cities and the theology of technology is that the Bible begins in a garden but it ends in a city (Bakke, 1997; Dyer, 2011). The largest macro-trends in world history reflect this truth. In *The Third Wave*, Alvin Toffler characterized history in three waves. Much of the Bible was set in the first wave of technology, which enabled the transition from hunter-gatherer societies to the agricultural age. The second wave of technology enabled the industrial age. The agricultural age enabled the initial development of cities, whose growth was further accelerated by the industrial age. We are in the middle of the largest mass migration in history (Toffler, 1984). In 2012, for the first time in history, more people now globally live in urban rather than rural environments. Figure 3 shows the long-term trend of urbanization. The blue line represents the percentage of people in urban environments and the green represents the percentage in rural (“Urbanization,” 2014).

Figure 3. Global Growth of Urban Population

The third wave that Alvin Toffler refers to is the information age. Urbanization represented the largest mass migration in history and is driven by the second wave of industrialization (Toffler, 1984). Now, in the third wave of the information age, there is a much more rapid migration happening in the virtualization of the world into online and digital formats as shown in Figure 4 (“Global Internet usage,” 2014).

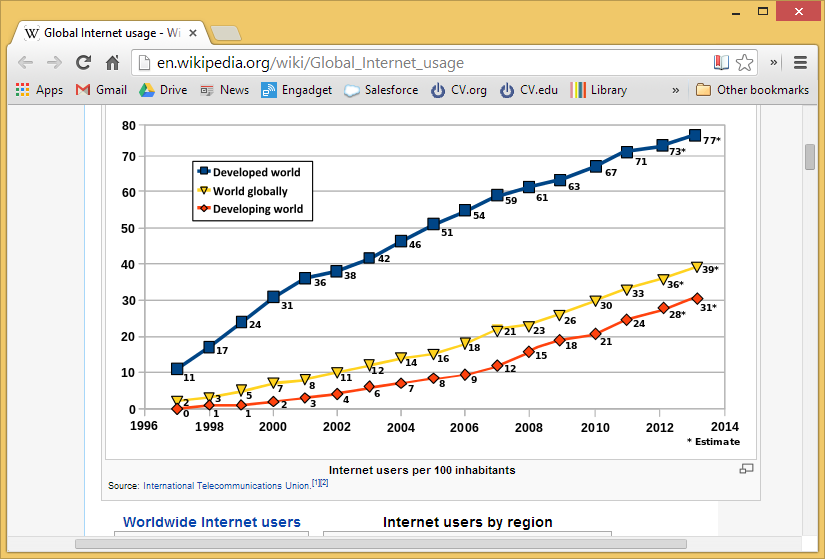
The yellow line in the Figure 4 represents the percentage of the world online; the blue is the developed world and, the red is the developing world. The analogy of urbanization to virtualization doesn’t exactly fit, because people actually don’t move from cities to a “virtual world,” but it is a helpful model because it allows us to apply a cultural framework to this trend, which I will discuss in chapter 4.

Figure 4. Global Growth of Internet Access

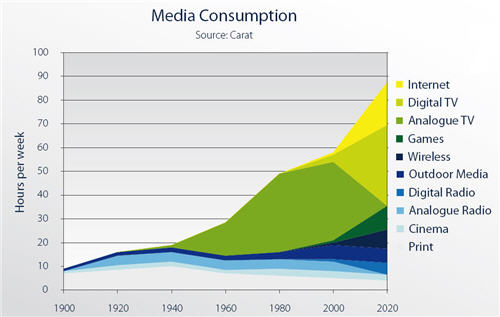
In the same way that people migrated physically to cities, in the information age people are migrating their time and attention to the virtual world of media. You might say that our time in the physical world has been getting colonized by the virtual world of media as shown in figure 5, which shows the hours per week by the average person in the United States in various forms of media (Roy, n.d.). Part of what is interesting about this figure is that for the first time in history we are spending the majority of our hours in a week in media. At almost the same time as the majority of the world migrated into urban areas, we are now spending the majority of our time in media.

Figure 5. Increasing Time Spent in Media

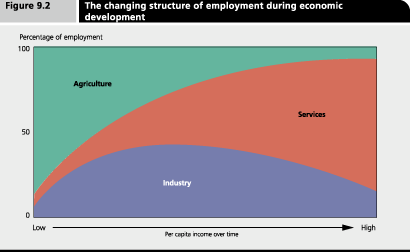
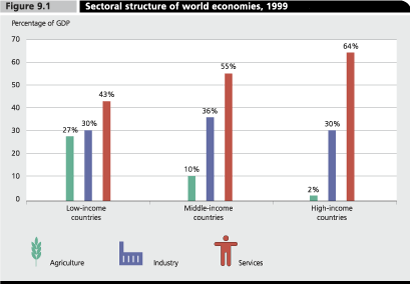
 Toffler argues that each of the waves in history brings a revolution in the institutions and structure of society (Toffler, 1984). One of the most significant shifts is the shift from an agricultural economy to a manufacturing-based economy to a services-based economy in the information age. This shift is illustrated in figures 6 and 7 (“DEPweb: Beyond Economic Growth, Chapter 9,” n.d.). As an economy matures it moves from the majority of employment being agricultural, to industry/manufacturing, to services. To effectively adjust to these waves requires new institutions and education. For each of these previous revolutions, the Church and Christians were the primary institution that helped society adjust to the new waves.

Figure 6. Proportion of Economy in Agriculture, Industry & Services by Developmental Level

Figure 7. Percentage of Employment in Agricultural, Industrial and Services Over Time

As the Industrial Revolution started to take place, the Church again took the lead in helping society respond to the transition. The Industrial Revolution created a growing need for basic literacy. Even before the Industrial Revolution, Martin Luther was a great promoter of literacy because it helped establish biblical education. The Church was the first group to meet this need on a wide-scale basis by the development of Sunday school by Robert Raikes in the 1780s. By 1785, 250,000 English children were attending Sunday school (“Sunday school,” 2014). For almost a century, Sunday school and primary schools established by churches were the dominant form of education in England until the Education Act of 1870 established compulsory primary schools with government funding. In the United States, various states made primary school compulsory starting in 1852 (Massachusetts) through 1917 (Mississippi) (“Compulsory education,” 2014).

It is important to note that there was significant controversy and debate over creating compulsory primary education. The primary advocates were industrialists who were concerned about the competitiveness of their countries. This is important to note because the same pattern was seen in the development of secondary education. This same pattern in the development of education in response to these waves happens in most countries with a significant Christian presence. Now this pattern is being repeated with higher education.

This section argued that to understand society’s our current place in history, it can be helpful to view the history through three waves of agricultural, industrial, and information ages. Through the transition to the agricultural and industrial ages, the Church was able to correctly diagnose the sources of the problems. This enabled the Church to be the primary vehicle for helping society effectively make adjustments to the changes. Now that the world finds itself in the middle of the information revolution, it is again up to the Church to correctly diagnose the root problems so that the Church can help society make this transition.

In diagnosing the root problems in the information age, it is helpful to have an effective theology of technology. The book *From the Garden to the City* provides an overview of a theology of technology (Dyer, 2011). The book explains that God’s intent was that humans would use technology to cultivate the earth. Since the Fall, our relationship with the earth and technology has been corrupted. We use technology only to find that, instead of technology serving us, we end up serving technology. The field of media ecology has helped us to understand that we both shape technologies and are shaped by technologies. One central question for Christian leaders to consider is How do we use technology in a way that maximizes the extent that it serves us rather than us serving technology?

### Loss of Manufacturing Jobs Leads to Urban Decay

When the Industrial Revolution came, it created a dramatic increase in the need for education. Cashiers, merchants, and customers needed to know math. Much of the population needed to know reading and writing. There was a long debate over whether primary and secondary education should be universal. In England, the Church saw this need 90 years before the government with the Sunday school movement in 1780 (“Sunday school,” 2014). It was only in 1870, that the government of England finally responded to new educational needs of the industrial age (“Compulsory education,” 2014).

In the book *When Work Disappears: The World of the New Urban Poor*, William Julius Wilson catalogs how the loss of manufacturing jobs from the transition to a post-industrial economy has devastated urban communities (Wilson, 1997). He explains that much of the decline of urban families can be attributed to the loss of blue-collar jobs creating widescale urban unemployment especially among black men.

Today, many of the problems in cities are related to a lack of education. Some key facts include (“The Urban Institute | Education,” n.d.)

* High school graduation cuts chances of poverty in half and boosts income by 49% from $19,169 to $28,645.
* Dropping out of high school increases chances of imprisonment by 350%.
* 60% of Black men not graduating high school spend time in prison by their mid-30’s.
* In the US, 72% of Black men not graduating high school are unemployed.
* Only 30% of low-income Black and Latino students go on to college compared to 78% of high-income White students.
* A bachelor‘s degree decreases the chances of a person being in poverty from 12.3% to 2.5% and increase average income by 80% from $28,645 to $51,544.

There is simply a gap between the educational needs of the job market and what the educational system is providing. This gap is shown in table 1 which shows that in the United States there are more people with either only a high school degree or less than a high school degree, or some college than there are jobs (A. Carnevale, Smith, & Strohl, n.d.). There are not enough people with an Associate’s Degree or Bachelor’s Degree to fill the jobs that require them. There are more jobs available, but there just is not enough education. By 2020, 65% of all U.S. jobs will require some form of postsecondary education (A. P. Carnevale & Smith, 2013).

Table 1. Growth in Job Demand by Educational Level

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Jobs in 2018** | **People in 2012** | **Difference** |
| **Less than High School** | 10% | 12.42% | -2.4% |
| **High School Degree** | 28% | 30.72% | -2.7% |
| **Some College** | 12% | 16.97% | -5.0% |
| **Associates Degree** | 17% | 9.45% | 7.6% |
| **Bachelors Degree** | 23% | 19.49% | 3.5% |
| **Graduate Degree** | 10% | 10.95% | -0.9% |

This data shows that the US is are in the middle of the information revolution, which is also creating a dramatic increase in need for education. Some visionaries like Bill Gates are calling for governments to provide universal access to higher education in the same way they do for primary and secondary education. In the same way that the industrialists drove education reform to maintain competitiveness, today the leaders of the technology age such as Bill Gates are driving education reform. There is a growing “open education” movement and Massively Open Online Courses (MOOCs) that are promising to transform education. At the same time, most of the structures and educational institutions established in the industrial age are very resistant to these changes.

### Long-Term Technological Unemployment from Automation

To equip Christian leaders in technology among the poor, it is essential to understand the impact that technology is having on the poor. A key issue facing the poor is the impact of job loss from automation on urban unemployment. The concept of “technological unemployment” is unemployment caused by technological change (“Technological unemployment,” 2014). Typically, when technology eliminates jobs, new jobs are created in other sectors. The fear that technology would create long-term unemployment has been so common throughout history that economists have called it the “Luddite fallacy” (“Technological unemployment,” 2014) In an article in *Wired Magazine*, Kevin Kelly, argues that although 70% of jobs will be automated in this century, they will be inevitably replaced with new jobs (Kelly, 2012).

Now, many economists are starting to wonder whether the prospect of long-term technological unemployment might finally be happening. In the past few years, many economists have noticed that some of the fundamental assumptions of how economies work have been changing, and many are attributing this toward job displacement from automation. *The Economist* commented that one of the old laws of economics was that labor’s share of total income in the economy has always been constant (between 64% and 66%), but for the first time in history that law appears to be changing (“Labour pains,” 2013). In the past few years, several books have looked at the prospect of experiencing long-term technological unemployment caused by automation.

*The Lights in the Tunnel* asks the question of what if we lived in a world where the vast majority (50-90%) of all jobs were automated, and only the most intelligent, educated proportion of the population was still needed to work (Ford, 2009). The book *Average is Over* explains that the result of technological automation is that the middle class is shrinking, while those at the extremes of rich and poor are growing (Cowen, 2013)*.*

In *Race Against the Machine,* Eric Brynjolfsson provides an excellent economic assessment of the implications of technology automation (Brynjolfsson & McAfee, 2011). The picture he paints is similar to the quote from H.G. Wells’ quote, “History is a race between education and catastrophe” (Wells, 1949). This book builds on that concept but explains how society is in a race between whether people will be educated to do new jobs faster than machines are able to replace them. The basic idea is that with new technologies such as machine learning, an increasing proportion of the economy is likely to be automated. If people are not retrained for new jobs, then society risks falling behind in the race with the machine, which could create the catastrophe that H.G. Wells warns of in his quote. Kevin Kelly frames it this way, “This is not a race against the machines. If we race against them, we lose. This is a race with the machines. You’ll be paid in the future based on how well you work with robots”(Kelly, 2012).

*MIT Technology Review* quotes Erik Brynjolfsson saying, “My reading of the data is that technology is the main driver of the recent increases in inequality. It’s the biggest factor” (Rotman, 2014). The article goes on to say, “Brynjolfsson argues that these people are benefiting from a winner-take-all effect originally described by Sherwin Rosen in a 1981 paper called ‘The Economics of Superstars.’” It seems that the current trend in automation is that 10 workers of average education and intelligence are being replaced by the work of one to two workers with extraordinary intelligence and the highest levels of education. While it may be true that new jobs will be created when old jobs are automated, there may be fewer new jobs, and most of the new jobs will require extraordinary intelligence and education.

A recent special report in *The Economist* on the World economy details this problem globally (“The Third Great Wave,” 2014). Carl Benedikt and Michael Osborne of Oxford University that states that 47% of employment in America is at high risk of being automated away over the next decade or two. It also lists disruptive innovation in higher education as a potential solution (Frey & Osborne, 2013).

The basic problem described above is that automation is displacing jobs more quickly than society is re-educating workers for new jobs. The obvious solution would be to improve education access. The challenge is that education costs are only increasing at a time when many governments are tightening their budgets. What is needed is an alternative system with different structures and costs that match the needs of the information age.

### Decreased Rate of Growth of Education

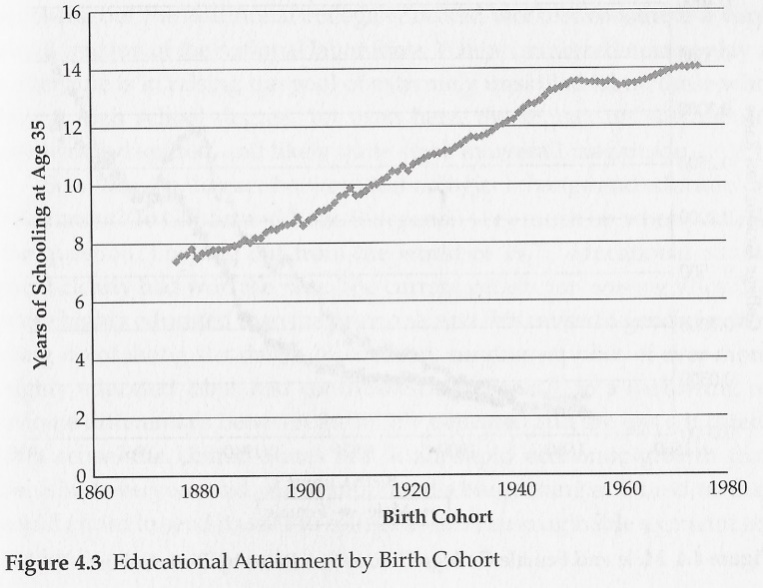
The problem is that at just the time when society should be investing more heavily in education, its growth has stalled. Figure 8 shows how the average educational attainment of people in the United States has dramatically grown over time. People born in the 1880s were likely to have an average of less than eight years of schooling (at age 35), but that dramatically grew to an average of 13 years by 1950. What is most telling about this chart is that there is an almost constant upward slope between 1880 and 1950. Then at 1950, the chart becomes almost level as growth in average educational attainment almost stops (Archibald & Feldman, 2010). To respond effectively to the needs of the Information Revolution, if anything, there should be dramatic growth in education; however, what actually happened is the opposite.

Figure 8. Educational Attainment by Birth Cohort

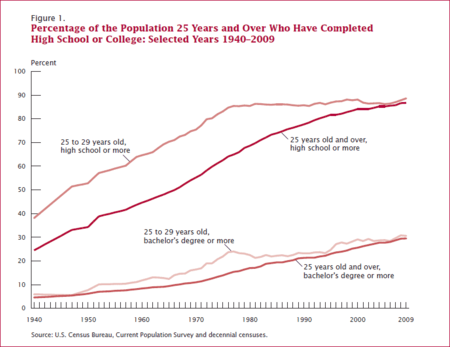
Figure 9 shows the improvements in educational attainment in the United States since 1940. Notably, the primary improvements since 1940 have been in the increase in the high school graduation rate which has increased by about 50 percentage points. The percentage of the population with a bachelor’s degree or more has only grown by about 20 percentage points in the last 40 years (“Educational attainment in the United States,” 2014).

Figure 9. Percent of Population 25 Years and Over Who Have Completed High School or College

Basic business strategy is to secure a market and then increase barriers to entry. One of the most common barriers to entry is regulation. The fact that accreditation bodies are controlled by a system of peer review, would tend to encourage incumbent colleges to limit the competition. Some have argued that regional accreditation in the United States largely functions as a cartel (Dimitri, 2005). Cartels typically limit supply in order to keep prices artificially high, as is done by OPEC with oil.

The pressures from technological automation would seem to increase the demand for education, but the problem is that the supply is not keeping up. The data in Table 1 showed that there is likely pent up demand for higher education due to the fact that when there is a shortage of highly educated workers, there should be an increased demand for higher education. Economic theory would suggest that supply would increase to equal demand, but that is not happening. A significant part of the reason could be that accreditation and higher education regulation in the United States is at least partially functioning as a restraining factor. Michelle R. Weise and Clayton Christensen has explained that this is one of the primary reasons disruptive innovation is likely to come from outside the traditional higher education system: “In order to be eligible for Title IV funding, innovators must seek out accreditation from a system that functions like a cartel” (Michelle R. Weise & Clayton M. Christensen, 2014). (Michelle R. Weise & Clayton M. Christensen, 2014)

Basic business strategy is to attempt to maximize profits by increasing barriers to entry through increased regulation. One good example of this is the extensive exams for taxi drivers and the limited supply of taxi medallions in many cities. A recent article in the Washington Post pointed out that the market for taxi medallions is outperforming the Standard and Poor’s stock index. “In New York, taxi medallions have topped $1 million. In Boston, $700,000. In Philadelphia, $400,000. In Miami, $300,000” (Badger, 2014) Now companies like Uber and Lyft are disrupting the taxi market by enabling an eBay-like market of small businesses providing transportation services. The article goes on to say, “Throw open the market — to amateurs, part-timers and the underemployed (and whatever they drive) — and medallions lose their exclusivity. Without which, they lose their value, too.”

The question remains of how much of the value of higher education is because there is a limited supply of degrees serving as “medallions” to the white-collar workforce. For Uber to be successful, it will need to demonstrate to the public that a technocratic personal transportation market is superior to the current regulated market. If they are able to reduce costs, increase supply, and maintain quality for personal transportation, then they stand a good chance of succeeding as long as they also maintain a strong legal and lobbying investment. If they do not do a good job of self-regulating quality, then they risk becoming subject to regulators. A similar situation will apply to disruptors in higher education. In the market for educated workers, if disruptors are able to prove to the public that they are able to decrease costs, increase supply, and maintain quality, they also stand a good chance of succeeding.

The overall trend in the past few decades in the United States is toward increased regulation of higher education with more authority of the U.S. Department of Education over regulators and schools (Matthews, 2012). As a president of an online college, I have noticed a significant increase in regulation of online education in the past five years, which is most typified by the new requirements on state authorization. This new ruling is requiring that online education institutions receive authorization or an exemption from all 50 states. A letter to the U.S. Secretary of Education outlined that this is likely to result in a substantial increase in cost of complying with regulation (“Letter to Arne Duncan Secretary of Education on State Authorization,” n.d.).

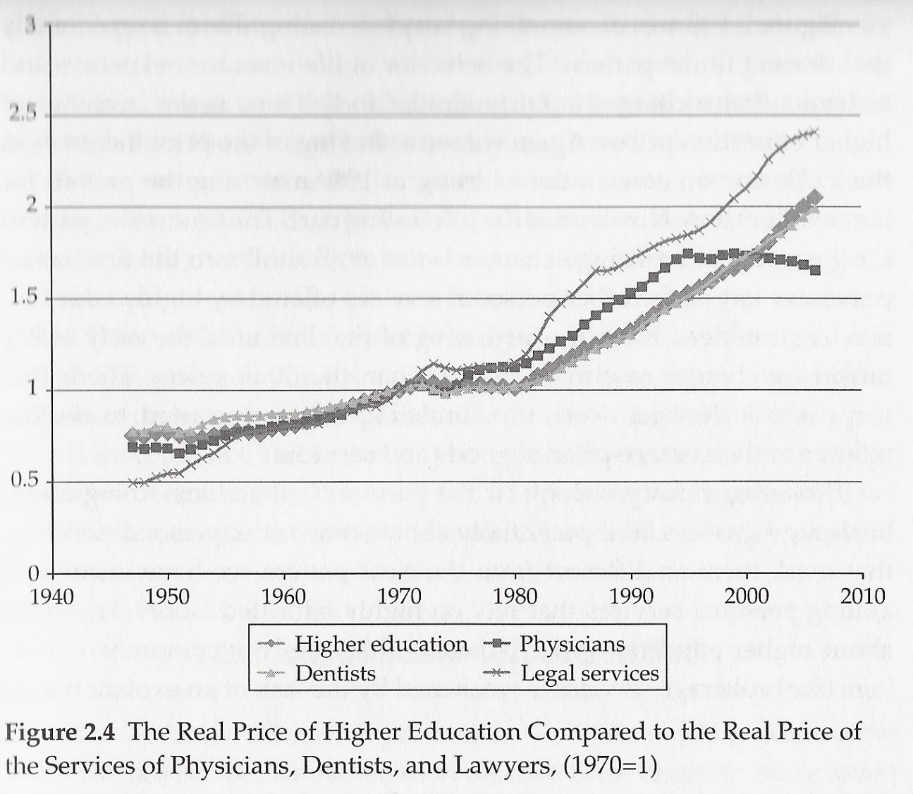
There are other reasons why there has not been more growth in higher education. Some of it is due to having systems of higher education that were modeled after factories of the industrial age but do not match the needs of the information age. Another major factor is the increasing cost of higher education.

### http://www.motherjones.com/files/costvstuitionv2.jpgIncreasing Costs of Higher Education

The fundamental problem with the current system of higher education is its cost, as shown in the figure 10 (Severns, n.d.). Figure 10 shows that since 1980, the price of one year of a 4-year college has grown 500% more than the rate of inflation.

Figure 10. Increasing Cost of Higher Education over Time

Higher Education suffers from what is called Baumol’s Cost Disease, which is the “rise in salaries in jobs that have experienced no increase of labor productivity in response to rising salaries in other jobs, which did experience such labor productivity” (“Baumol’s cost disease,” 2014). For example, the average worker in 2014 might do the work of 10 workers a century ago, but a college lecturer in 2014 uses the same format as one a century ago (or 700 years ago) with very little productivity gain. Economics would say that the average wage should rise proportionate to the 10 times increase. For a college to continue to offer a competitive wage for lecturers, the costs they pay the lecturer would increase on a similar order. While it does not have to be a 10-fold increase, if every academic could go into the private sector and experience a 10-fold increase in pay, there would be few academics. The company that pays employees who are 10 times more productive, only needs to have one-tenth of the employees to get the same work done, so their costs do not increase. Baumol’s Cost Disease applies especially to people in fields requiring very high education but also involving a lot of personal interaction, which cannot be easily automated like professors, physicians, dentists, and lawyers.

The book *Why Does College Cost So Much* provides excellent data of how Baumol’s Cost Disease affects higher education as shown in Figure 11, which compares the cost of higher education to that of dentists, physicians, and legal services (Archibald & Feldman, 2010). All of these services have grown at about the same rate.

The primary challenge to this argument is that higher education has not been as effective in improving its productivity as other industries have. The lecture is essentially using the same method as was used in the year 1500. Almost no other industry could say the same. The result of this is that while every other industry has seen dramatic improvements in productivity, higher education has not, which makes its cost higher relative to other sectors of the economy. The average worker in the United States in 2001, can do the work of 60 workers in 1500 (Maddison, 2004).

Figure 11. Real Price of Higher Education Compared to the Real Price of Services of Physicians, Dentists and Lawyers (1970=1)

Understanding this 60-fold difference in productivity growth explains underlying cause of many of the significant changes in higher education. Today, it is obvious that a one-to-one tutoring system by professors is not economically sustainable, but changing productivity enables us to understand how it could have been hundreds of years ago. Productivity changes also explains that many of the most distasteful aspects of higher education such as machine graded exams, lectures taught to hundreds or thousands of students at a time, the increasing prevalence of teaching assistants, the growth of administrative staff, the increasing proportion of adjunct professors, and the growth of student debt. These are all ways to attempt to increase productivity compared to the larger economy that has had a 60-fold increase in productivity.

It is critical to understand that basic economic laws are the driving source of all of these “problems” in higher education. Critics may say that the solution to the problems of higher education is to get rid of standardized testing, large lecture halls, teaching assistants, administrative staff, and adjuncts. That approach is lacking because it fails to understand that these are all symptoms of Baumol’s Cost Disease. It is essentially a technophobic response that attempts to “unplug” from technological and productivity advances thinking they are the problem rather than a symptom of a larger problem.

To find more effective solutions, it can be helpful to look at other historical case studies. One of the most telling case studies is the decline of subsistence farming in the face of the industrial revolutions. The decline of subsistence farming was caused largely by the growth of productivity due to industrialization (Dimitri, Effland, & Conklin, 2005). If one farmer could do the work of 10 people, then the price of the harvest goes down because of the increase in supply. The same crop brings in declining revenue that limits the ability of the farmer to purchase goods. Some farmers chose a Luddite response by avoiding any of the productivity producing machines altogether. Aside from a few communities like the Amish, those farmers largely were driven into poverty and out of family farming. Other farmers zealously embraced the technology and were driven into debt and later lost their farms to creditors. A third category was more thrifty and discerning, and judiciously applied technology to stay competitive. They also recognized that a part of the implications of technology was that achieving a certain scale was necessary to compete. They grew and used technology to remain competitive. They also successfully lobbied Congress to provide farming subsidies and tariffs to protect from competition. Most farms that are financially sustainable in the United States today are that way because of a combination of increased scale, judicious use of technology, and government subsidies.

Institutions of higher education have much to learn from how industrialization affected farming. This study argues that the strategies most likely to succeed will mirror those of successful farms in responding to industrialization. Higher education will need to be thrifty and make judicious use of technology. Those that survive will likely need to scale up. They will need to recognize that the economic laws that have made one-to-one tutoring by tenured professors economically unsustainable are also creating similar challenges for smaller class sizes taught by tenured professors. Some institutions with a combination of low labor costs (or government subsidies) and moderate to high tuition may be able to still be sustainable with small classes sizes with tenured professors, just as subsistence farming still works in parts of the developing world.

### Regulation, Rising Debt, Justice, and the New Rise of Indentured Servitude

One would expect the higher education industry to attempt to protect itself through government aid and regulation just as the farming industry did. The strategy of pursuing increasing government subsidy worked in the United States in the mid-1900s. Now higher education faces a climate of decreasing availability of government funds largely due to the growth of government entitlement spending. The result has been primarily a two tiered strategy: limit competition through regulation and while seeking government subsidies.

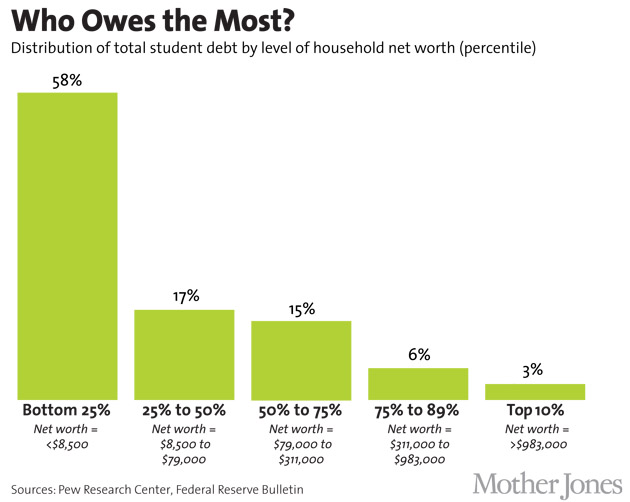
The result is that costs continue to increase, which drives increasing student debt. With rising costs and declining funding from state legislatures, colleges have balanced the budget by increasing student debt, which has grown nearly 300% in the United States. Between 2005 and 2012, the number of student borrowers increased 66%, and the average student loan balance increased 49% (Severns, n.d.). For the class of 2012, the average student loan debt nationally was $29,400. For schools in the Council for Christian Colleges and Universities, the average debt of 2013 graduates was slightly less at $28,558 (Council for Christian Colleges & Universities, “CCCU Releases Results of Annual Financial Aid Survey,” n.d.). This creates multiple justice issues for Christians.**Impact on the poor.** As Figure 12 shows, 58% of loan debt is going to the poorest 25% of society (Severns, n.d.). The problem is that much of this is federal debt, and bankruptcy laws typically do not cover federal loan debt. This means that low-income students with loan debt they cannot pay off will have that debt until they die. The whole purpose of bankruptcy laws was to avoid indentured servitude where people live their whole lives in debt. The rise of student loans means that the same problems with indentured servitude are coming back.

Figure 12. Distribution of Total Student Debt by Level of Household Net Worth

Clayton Christensen identifies some of the injustices in higher education as one of the primary motivators of the push for disruptive innovation in higher education:

According to the Georgetown University Center on Education and the Workforce, when one looks at the trends of freshmen enrollments since 1994, 82 percent of students who attend the top 468 colleges are white, whereas 72 percent of new Hispanic enrollments and 68 percent of African- American enrollments are in open-access, two- or four-year colleges where completion rates are substantially lower: 49 percent for open-access two- and four-year colleges versus 82 percent for selective colleges. Only eight percent of those who attend the top 468 colleges come from the bottom income quartile. (Michelle R. Weise & Clayton M. Christensen, 2014).

**Fewer Christians serving the poor.** During the past 10 years, TechMission has recruited about five hundred applicants annually for one-year, full-time urban ministry internships. A few years ago, I noticed that we were experiencing a significant decline in the number of students we interviewed that would go on to serve the poor. The common reason was that they had so much loan debt that they had to get the job that would maximize their income. We could be losing a whole generation of Christians that would have served the poor from the non-profit sector, but they could not afford to because of student debt. This is affecting both middle-class and poor students. In the past, my experience was that the majority of Christians who do ministry with the poor were poor themselves. Now we are seeing fewer individuals from poor communities go back to their communities because they can only afford to get a job that maximizes their income. The result is that Christian colleges are contributing toward upwardly mobile class assimilation to jobs of the rich rather than the identification of the poor that Jesus followed. I have found that once these students go there for their initial jobs, it is incredibly difficult to get off the treadmill of consumerism, which ensures that the class assimilation is complete. This “brain drain” further contributes to the decay of urban communities.

**Overinvestment in majors with a negative return on investment (RoI).** Payscale recently did a study on the RoI of majors and schools (“College Education Value Rankings - PayScale 2013 College ROI Report,” n.d.). They found that many schools and majors had a negative RoI. In some cases, $100,000 invested in education would result in that individual making more than 10% ($10,000) less per year than if they had not gone to school. However, it is critical to realize that there are many majors and careers with value infinitely beyond the pay such as ministry. RoI is only a helpful measure to assess how well a school meets a student’s expectation for a better job with increased pay rather than other measures that can be more important for Christian educational institutions. There is increasing concern that schools promote majors based on their profitability to the school rather than to the student. I have heard leaders from these schools deny any responsibility in encouraging students to pick majors that may ruin their lives financially. While schools only are partially responsible because sometimes they cannot stop someone from making bad choices, schools can control their admissions caps for the majors that might be popular but often a bad career direction. In my opinion, it seems that most Christian colleges are not willing to do that because they have too much financial pressure due to high costs.

We recently had an intern come from a Christian college. She came from a low-income family, and after two years in college, she had accumulated over $50,000 in debt. She also told us about a group of her friends who were students that were homeless and lived in tents on the school’s land because they could not afford both tuition and housing. She also mentioned a friend of hers who had recently graduated with over $100,000 in debt from the school and was homeless, living out of a van with no job prospects. We were willing to give her free tuition in City Vision College; however, she went back to the school to be with all her (mostly rich) friends and will likely graduate with over $100,000 in debt. She said that while she would like to work with the poor after college, her only option is to work in finance to be able to pay off her debt.

Her story provides a personal side of how policies and systems of Christian institutions can ruin lives. On one hand, there was nothing I could do to convince her to avoid further debt. On the other hand, the school could implement policies to reduce the number of students like her and her friends. The school is now boasting record enrollments, but I wonder about the cost of those numbers in the effect on human lives. The real issue that these stories bring out is that many Christian colleges and universities are significantly increasing the number of students like these, where policies are encouraging them to make bad choices that are ruining their lives because the school is not willing to make the hard choices needed to respond to the changes happening in higher education.

### Global Growth, Changing Demographics and Massification

The trend of rising cost of tuition is creating the “perfect storm” for disruption when combined with the trends of changing demographics. Many schools in the United States are just now starting to recognize the changing demographics of the United States. Minorities will comprise more than half of children in the United States by 2023 and 62% by 2050 ( U.C.B.P.I. Office, n.d.). The other trend is the shift globally of demographics. The changes in global Christianity have been covered well in books like *The Next Christendom* (Jenkins, 2007). The overall impact of these demographic shifts is shown in the Figures 13 and 14 that shows the church membership and percentage the growth of the church in the West and the rest of the world (Todd Johnson, 2014).

Figure 13. Christian Membership by Region

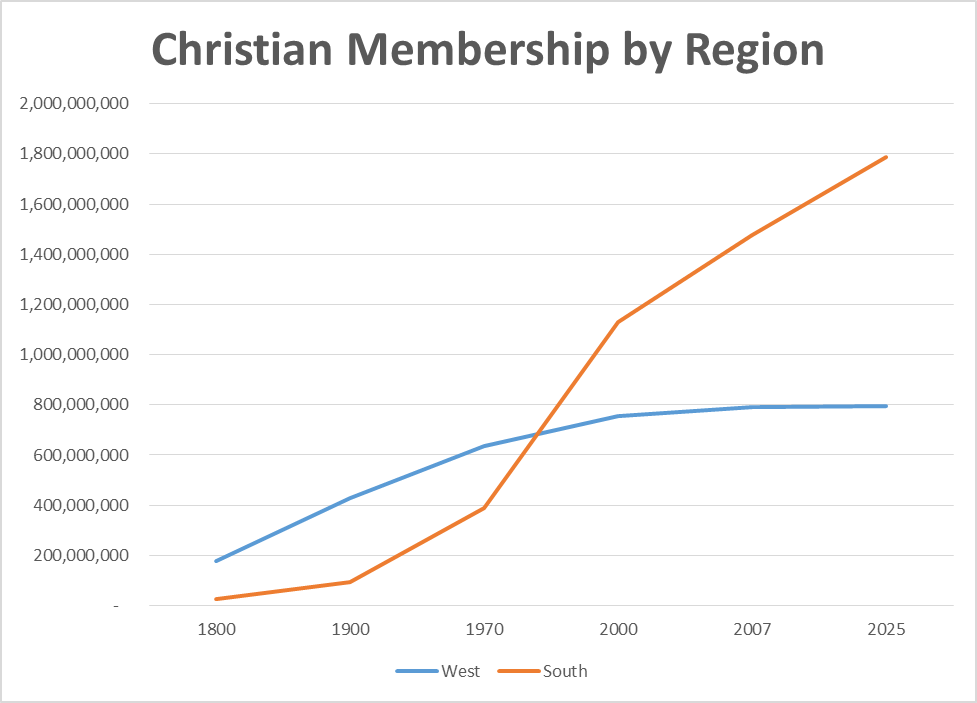
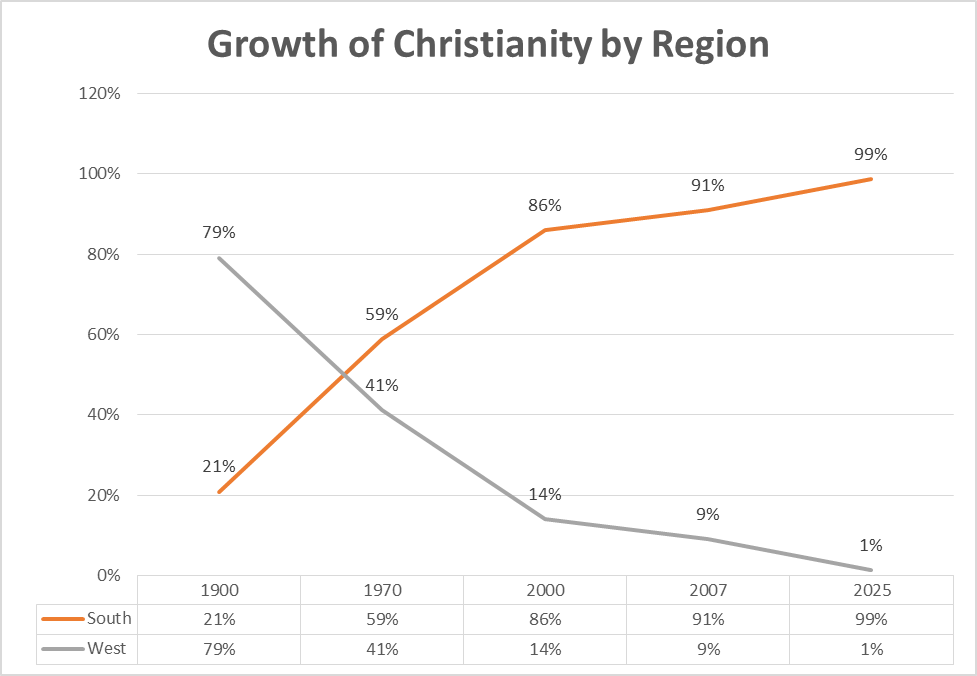
Along with the non-Western growth of Christianity, there is also a dramatic growth in non-Western higher education institutions and students. India alone plans to create 50,000 colleges (12 times the United States total) and 1,000 universities by 2020 (Hill, 2012). It is likely that this growth will enable India to play a key role in offshoring components of higher education in Western countries to reduce costs. In addition, there are now more than 24 mega-universities that have more than one million students (Marope, n.d.). The global market for higher education is projected to expand from 100 million in 2000 to 263 million in 2025, with the vast majority of this grow coming from the developing world (Karaim, 2011). Overall, this trend of bringing higher education to a mass audience is being called “massification” and is calling for new frameworks to address this growing need (Guri-Rosenblit, Šebková, & Teichler, 2007).

Figure 14. Percent of Church Growth by Region

The above conditions are creating a perfect storm for disruption is that the cost of higher education is growing dramatically. This is happening at the same time that the largest source of new students is coming from populations with lower income on average than traditional students. The result is likely to be that many of these students will bypass traditional higher education to choose more cost-effective options.

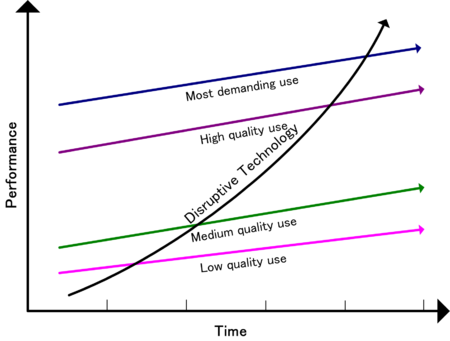
### Cultural Imperialism in Christian Higher Education

There is a growing realization of the imbalance in the fact that the majority of Christian institutions and resources come from a White Western perspective, but the majority of Christians are non-Western. This has been discussed extensively in *The Next Evangelicalism* (Rah, 2009). Faculty and leadership of Christian colleges globally are largely White and Western. In addition, much of the institution of Christian higher education rests largely on the Christian publishing industry. The top ten Christian publishers in the world are all Western companies, and together they control 82.3% of the total market (Hyatt, 2008). It is likely that much of the remaining market is also dominated by Western publishers. The result is that much of what students are assigned to read globally is from White, Western, male authors. This fails to contextualize the gospel in the culture and language of each community. The result is a form of cultural imperialism that requires that students of all cultures conform to the standards of White, Western culture.

All of these drivers of change represent key factors that leaders in Christian higher education need to consider. In the following section, I will highlight some of the technology leadership principles for leaders of Christian organization.

### Disruptive Innovation in Higher Education

One of the areas of promise in higher education is that disruptive innovation in higher education will dramatically reduce cost and expand access to higher education. The term *disruptive innovation* was coined by Clayton Christenson and is defined as “a process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors” as shown in Figure 15 (Christensen, Clayton, n.d.).

Figure 15 shows that a disruptive technology, like digital cameras, starts with inferior performance. Typically the disruptor is focused initially on serving the least profitable customer, who is satisfied with a lower quality product. It then improves its quality to enter into a medium quality segment that has increased profit. Gradually over time, its quality improves until it eventually displaces the previous other technology.

In the past decade, various books have addressed the potential and problems of disruptive innovation in higher education. Some of the sources have deep roots in traditional academia, while others represent more of the challengers to the status quo in academia. In *Disrupting Class*, Clayton Christenson explains how education is likely to be the next industry to experience disruptive innovation. His basic thesis is that the new technologies are likely to enable a new modular student-centric approach to learning by providing customized learning for each student (C. Christensen et al., 2010). In *College (Un)Bound*, Jeffrey Selingo provides one of the best overviews of the current trends and likely future of higher education (Selingo, 2013). His thesis is that higher education is broken following many of the same patterns of the American automobile industry to build bigger while ignoring the problems of rising tuition costs, dropout rates and low job-placement rates.

Figure 15. Increasing Performance/Quality of Disruptive Innovation over Time

In *The Idea of the Digital University*, McClusky and Winter have a very clear thesis: the digital university is a fundamentally different institution from the traditional university (McCluskey & Winter, 2012). They provide the perspective of practitioners that are fully grounded in both traditional and new innovative universities. Their basic idea is that the traditional university will not go away, but there will be an entirely new model that develops that they define as the digital university (i.e. a new wineskin). In *From Abelard to Apple*, Richard DeMillo provides a wake-up call for the two thousand colleges and universities in the “middle” between the top 80 elite schools and the low-cost community colleges (DeMillo, 2011). His basic thesis is that if these schools do not change, they will be heading for marginalization or irrelevance.

Together, these books make a very compelling case that higher education is about to experience disruptive innovation. Disruptive innovation theory would say that this disruption is likely to start with a product that is initially inferior in quality, but can dramatically improves over time. This disruption most often comes from outside the traditional regulatory structures, such as accreditation. It will gradually improve its quality until it is as good or better than traditional accredited institutions. While Massively Open Online Courses (MOOCs) such as Coursera, EdX, and Udacity are often identified as the potential source of disruptive innovation in higher education, Clayton Christenson has stated that he expects the disruption to come from competency-based online education (Michelle R. Weise & Clayton M. Christensen, 2014). The leaders in competency-based education are Western Governors’ University and Southern New Hampshire University. The only two Christian institutions with competency-based programs found in this project are Lipscomb University and Antioch School of Church Planting and Leadership Development.

The overall trend of these new technologies is to deskill significant parts of the educational process in order to reduce the cost of labor (Bradley, Seidman, & Painchaud, 2011); Voorhees, 2001). Typically the way that competency-based program deskill labor is some combination of 1) replacing live lectures with online lectures and materials that can be self-paced, 2) replacing classroom discussion with online discussion forums, 3) replacing tutoring, mentoring, student support, and grading by a single highly-skilled faculty with pools of lower skilled mentors (assigned per student for the entire program) and tutors (assigned by course) that are essentially academic paraprofessionals. This might allow an organization to use a pool of 50 tutors to support five thousand students. In many cases, the relational component of programs can go up by providing increased one-to-one tutoring and mentoring in areas they need help as identified by the student or by the tutor using analytics on student performance. Because they would be lower-cost paraprofessionals they are able to increase relational contact while overall costs go down.

Disruptive innovation theory would state that initially low-cost competency-based online degrees are viewed as inferior from the degrees of more established institutions. The brand of the institution providing the degree is more reliable than the analytics of a competency employment profile. Disruptive innovation theory predicts that the competency-based online education will gradually improve in its ability to predict who will become an effective employee as shown previously in the black-line in Figure 15. First it would surpass low-quality schools, then medium quality and finally the high quality schools. This is not to say that the brand of higher education institutions will go away, but that it will just become one of many data points in the employment analytics that companies examine in future employees.

Competency-based online education is attempting to follow the trend popularized by the movie and book *Moneyball*, which was the story of how analytics triumphed over intuition in picking the right baseball players for a team. Similarly, Amazon.com realized that they were competing with the trust that customers have in physical retailers to pick quality products for them. Amazon.com effectively responded by promoting reviews and a wealth of data on each product. This allows Amazon.com to provide millions more products than any retailer while still ensuring quality that many trust more than that of physical retail stores. Similarly, a competency-based online education could eventually provide competency profile analytics on millions of students in ways that could be superior to degrees. When and if that happens, then higher education will be effectively disrupted.

While some might argue that higher education is about more than jobs, and it is, but the reality is that the primary value proposition it provides to students is to help them get better jobs. Christian higher education can and should do other things (discussed in part 2 of Chapter 2), but if it is to remain relevant and competitive with secular higher education, it will also need to help students get jobs. Weise and Christensen explain why this is an essential component of disruption in higher education:

Students themselves are demanding more direct connections with employers: 87.9 percent of college freshmen cited getting a better job as a vital reason for pursuing a college degree in the 2012 University of California Los Angeles’ Higher Education Research Institute’s “American Freshman Survey”—approximately 17 percentage points higher than in the same survey question in 2006. A survey of the U.S. public by Gallup and the Lumina Foundation confirmed similarly high numbers. “Learning and work are becoming inseparable,” argued the authors of a report from the Institute for Public Policy Research, “Indeed one could argue that this is precisely what it means to have a knowledge economy or a learning society. It follows that if work is becoming learning, then learning needs to become work—and universities need to become alive to the possibilities” (Michelle R. Weise & Clayton M. Christensen, 2014).

### Systems Model Understanding of Increasing Costs in Higher Education

There have been many attempts to describe the increase in costs of higher education (DeMillo, 2011; McCluskey & Winter, 2012; Archibald & Feldman, 2010). The field of systems theory can provide a helpful framework for understanding the driving factors of cost increases in higher education so that leaders can better understand how to effectively respond. One idea from systems theory is the concept of nested systems. Each system can be an integrated whole (like a university), but at the same time be a part of a larger system (the global economy). In diagrams below, the dominant system factors are shown on the left. It follows the following steps of logic as shown in the diagram below:

1. The dominant system is that there is a drive in human history to increase productivity in the global economy.
2. As productivity in other sectors has increased 60 times in the past 500 years, the cost of higher education has increased.
3. In order to cope with these increasing cost, higher education has implemented various measures as ways to improve productivity.

This first system is the most important to understand because it provides the most helpful framework to understand how higher education relates to disruptive innovation.

A second system model is also at play in the rising costs of higher education. This model is driven as follows:

1. There is increased concentration of wealth among the rich and decline of the middle-class largely driven by increasing automation (Cowen, 2013). There is also decreased government funding of higher education driven largely by entitlement spending and demographics.
2. The result of (1) is that more schools are competing for the rich students, who can pay full tuition. It should be noted that in almost all sectors of the economy, the focus of marketing has shifted from the middle class “Joe Six-pack” to the top tier of customers.
3. The result of (2) is that schools have to increase their costs to meet the demands of their richer clientele that is becoming their primary source of revenue.

Decreasing Gov’t Funding of Higher Education

It is worth stating that this second model, focusing increasingly on growing demands of high end customers, is exactly what Clayton Christensen has identified as the trap that industries follow right before they are disrupted (C. M. Christensen, 2011). Institutions may need to follow this strategy in the short-term to balance their budgets, but in the long term they will need to invest in disruptive innovation through independent “skunk works” (C. M. Christensen & Raynor, 2003). This was typified by the “dead end” strategy of American car makers responding to foreign competition in the 1990s by focusing on larger vehicles like SUV’s and minivans.

The above two system models explain the primary systems driving the increasing costs of higher education. It is worth stating that the trend toward automation discussed in section 3 of this chapter is a driving factor of both of these systems: automation is a part of the increases in productivity, and automation is driving the increasing wealth concentration among the rich.

The common approach to blame much of the rise of costs all on administrative bloat (Denneen & Dretler, 2012) is not helpful for multiple reasons. One problem is that it lumps too many costs together as administrative, some of which save costs (backoffice technology systems, using lower-paid administrative staff for faculty functions) and others that increase costs (student services, student amenities, many athletic programs). The other problem is that it fails to recognize that the market structure has changed for rapidly-changing, knowledge-intensive industries like higher education. The new market structure in industries like this requires highly competent management with more executive authority than higher education has needed in the past (Burton, Obel, & DeSanctis, 2011). As discussed previously, the rise of the superstar economy driven by automation is requiring more highly competent management. The third reason the focus on management costs is not helpful is that it misses the bigger picture that while most workers have had a 60-times productivity gains in the past 500 years, higher education has had very little productivity gains. The net effect of Baumol’s cost disease is that the labor costs of higher education have gone up dramatically over this period. From this perspective, the growth of administrative costs are from two sources 1) more administrative staff that are a substitute for higher paid faculty in an effort to reduce costs from 2) increasing costs of top administrators resulting from the superstar economy.

### Consolidation and the Economics of Online Education

The dominant factor of the online is that once you get to scale the marginal cost (the cost to add one more student) in online education is very low. Most of the costs in online education are fixed costs that depreciate over time as content and technology quickly becomes obsolete. For example, most of the content for our Master’s program in Technology and Ministry will become fully obsolete and be fully depreciated within five years. If the cost to develop course materials is $50,000, the program director and support costs are $100,000 per year and the marginal cost per student is $200 per student in each 3 credit course, and then if the program has 50 students over five years, it would still take a loss of $82,000; however, if the program had 500 students over five years, it would make a profit of $4.2 million. The result of a competitive market is that the price will eventually get close to the marginal cost, which will make it essential to scale. In the example above, with 500 students City Vision could still break even charging tuition of $2,700 per student, whereas with 50 students, City Vision still takes a loss charging $10,800 per student.

Currently, higher education has avoided this drive to marginal cost pricing in online education by limiting competition through regulation. Online education also has not yet become commoditized because of branding. Competency-based education is seeking to change that, as the data provided by a competency employment profile becomes more reliable predictor of success than the brand of institution you received your degree from. As portions of online education become more of a commodity, then marginal cost pricing will come to dominate the economics of online education. Currently, it appears that the first areas to be commoditized are the general studies in freshman, sophomore years and the most standardized degrees like business.

College for America currently is offering a General Studies associate’s degree to 100,000 students for $2,500 per year, all inclusive (“College for America,” n.d.) . With 100,000 students for two years, the program will bring in $500 million in revenue. As long as College for America’s marginal cost per student is moderately less than $2,500, then it could easily be profitable at that scale. While there are currently 24 mega-universities that have more that 1 million students (Marope, n.d.), it is likely that the economics of online education will increase the number of mega-universities.

Liberty University currently has over 100,000 students, more than quadrupling its enrollment since 2005 and rapidly growing its assets to over $1 billion(Anderson, 2013). During roughly that same period, the combined 115 member of the Council for Christian Colleges and Universities (CCCU) grew by only 32,686, which is less than half the growth of Liberty University alone (“Council for Christian Colleges & Universities - CCCU Reports Surging Enrollment for Christian Higher Education,” n.d.; “Council for Christian Colleges and Universities,” 2014).

The overall trend from this consolidation is that the very largest schools are likely to see the most growth, while many others will either grow slowly, stay level, or shrink. Many institutions are delaying making the painful choices to adapt to these changes and are putting their institutions in an unsustainable position. A Bain and Company paper “The Financially Sustainable University” provided a list of criteria to assess financial risk of schools (Denneen & Dretler, 2012). Using that criteria, an analysis of CCCU schools showed that only 40% were sustainable, while 28% were considered at-risk and 33% were unsustainable (Gehrz, 2013).

### Technology is a Gift from God that is both Corrupted by the Fall and a Part of God’s Plan of Redemption

All of the context provided in this chapter could be summarized in the theological perspective that technology is a gift from God, which is both corrupted by the Fall and a part of God’s plan of Redemption. In *From the Garden to the City,* John Dyer applies a grand narrative approach to a theology of technology (Dyer, 2011). He explains that technology was a part of Creation with Adam and Eve cultivating the garden and naming animals. That technology is a gift from God that we are to use as a part of the creation mandate. In the Fall, technology like everything else became corrupted. God then uses technology as a part of redemption first in the fig leaf that Adam and Eve used to cover their nakedness. Throughout the Bible there are examples of technology as a part of the Fall (the Tower of Babel) and as a part of Redemption (Noah’s Ark).

The word used to describe Jesus’ occupation is *tektōn*, which has the same root as where we get our word for technology (“Tektōn,” 2014). Jesus was someone who used the tools of his day to build things. If he were born today, he could have been a computer programmer. Jesus spent 90% of his life as a technologist of his day providing another example of the redemptive use of technology. As a carpenter, it is telling that God also enabled his Son to be crucified on the very material that he worked with professionally.

The field of media ecology also provides a helpful framework for understanding the role of technology both in the Fall and in Redemption. Media ecology was established by Marshall McLuhan and was popularized by the phrase, “the medium is the message” (McLuhan, 1996). The concept behind media ecology is that technology has many non-obvious and unintended ways of shaping society and culture. The basic idea of this field is that technology is shaped by people, but it also shapes people and society.

TechMission, with the values of Jesus, Justice and Technology, exists at the intersection of two streams: Jesus-Justice theology and Jesus-Tech theology. While Bakke’s *Theology as Big as the City* provides a theology of the city and justice (Bakke, 1997), Dyer takes a similar approach to establishing a theology of technology . In our Master’s program, we start with a Theology of Technology course. What we are hoping to do is to blend the Jesus-Justice stream with the Jesus-Tech stream to establish our own Theology of Technology and Justice. The main principle from theology of technology to apply is that we are called to cultivate technology (the earth), not let technology be our master. The key theme throughout our degree program is that we can either own technology and shape it to be redemptive, or technology will own us and shape us. This principle will have key implications that will be applied throughout this paper.

### How Project Will Transform a Particular Aspect of this Context

At TechMission and City Vision our goal is to use disruptive innovation in higher education to equip the poor. Right now, City Vision has been able to use online education to provide Bachelor’s degrees in the United States at $6,000 per year (priced less than 95% of private nonprofit institutions) and in developing countries for $3,000 per year. We have partnered with Straighterline.com, one of the leading low-cost disruptors in higher education, to provide a competency-based Associate’s and Bachelor’s degree decreasing our tuition in the United States to $5,000.

We have chosen to develop a Master’s degree in Technology and Ministry to bring change to the contexts listed in this section. We believe that change starts with leadership. Our theory of change is that disruptive innovation in higher education to help the poor starts with leaders in technology. Because of that, we knew our next step needed to be to create a program to develop Christian technology leaders. We also recognized that a part of disruptive innovation theory is to gradually move into higher quality markets, and we recognized that in order to be positioned to disrupt undergraduate education (which is becoming less financially sustainable), we needed to move into graduate education (which is more sustainable). Essentially, we plan to slowly disrupt ourselves at the low end of the market and maintain our financial sustainability at the high end.

In considering all of the above context, the conclusion was that our next step would be to develop a Master’s in Technology and Ministry as a degree program that will equip Christian leaders to effectively respond to disruptive innovation. Our steps in our process are summarized by philosophy of “see one, do one, teach one.” The “see one” aspect comes by primarily working with leaders that are already in a technology ministry context, or if not, are placed in one through our internship program. “Do one” is the focus of our Master’s program in that the goal is to equip people to *do* technology ministry. The next phase of City Vision will be the “teach one” phase, where we will focus on equipping tech-savvy leaders in institutions of Christian higher education serving the poor.

# Chapter 4: Technology Leadership Principles for Christian Higher Education

## Scenario of Higher Education in 2035

While the previous section provided technology leadership principles for Christian organizations in general, this section will focus on technology leadership principles for Christian higher education. This section will start with a possible future scenario as a tool to assess future possibilities in a way to inform strategy (Chermack, 2011). This section will envision a possible future of how disruptive innovation might change higher education, so that institutions of Christian higher education can follow the most effective strategy in preparing for that change. The focus will be on how architectural landscape of the higher education will change in the next in 20 to 30 years. It is helpful to put a longer timeframe on this transition because Amara’s law indicates that it is only in the longer-term that we will see the true impact of the disruption.

As the co-founder of the Internet Telephony Consortium at MIT, the primary value I added was as an architect that could anticipate how the pieces would fit together of the new system of telecommunications after it was disrupted by Internet and mobile technologies. I was able to correctly envision much of the future architecture of this system as well as many of the roles of future players. My experience as a consultant to Sprint was that even with a team of 15 staff at Sprint, we could not convince the company that their billion dollar investment in Asynchronous Transfer Mode (ATM) technology was likely to be obsolete. ATM technology was an attempt by traditional phone companies to cope with the digital world and carried with it many of the bureaucratic anachronisms from the telecommunications industry. It was only after time made it incredibly obvious that Sprint saw that Internet technology was likely to surpass ATM. We saw that many of the members of the Internet Telephony Consortium like Nortel were unable to adapt their expertise from the bureaucracy of traditional telecommunications to the rapid innovation needed in Internet technology. As a result of inability to adapt, Nortel became bankrupt. One thing that Sprint did realize was that they could no longer define themselves as a “long distance” phone company. They recognized that they needed to shift, and effectively reinvented the company as a mobile company and were able to weather the transition successfully.

Disruptive innovation theory states that it is likely that the disruptive innovation will compete on new parameters that were not previously valued by the legacy system. Most companies bringing disruptive innovation to higher education say that the effective use of data will ultimately be their primary source of competitive advantage similar to how Amazon.com uses data to compete with physical retailers. Some of the likely dimensions that will provide a competitive edge to the disrupters include: cost, convenience, credentialing existing knowledge, adaptive learning, coverage of every possible topic, micro-competencies/badging, time-shifting, anywhere/any device access, avoiding learning unneeded topics and ability to adapt to different learning styles.

My goal in presenting this is to describe as accurately as possible, my best assessment of the future without any particular agenda. My intent is not to present this at all as an “ought” or what “should be,” but instead as what is likely. Some aspects of this future may seem dystopian (loss of privacy, utilitarianism), and others may seem utopian (doubling access to higher education). The goal is to present a possible future to inform the strategy of Christian higher education institutions.

The following scenario is a possible future of higher education in 2035, which could be helpful to use in developing strategies for the future. In 2035, over half of students globally will complete their higher education through one of three or four companies providing courseware platforms. These courseware companies will invest billions of dollars in developing free, adaptive, competency-based learning to provide both accredited degrees and non-accredited competencies. Their primary value will be in providing employment analytics to future employers. They will recognize that more than 60% of the global Gross Domestic Product goes toward labor, and they will be willing to make miniscule margins improving the efficiency of the world’s largest market, human capital. Google (or another platform company) recognizes this and they acquire LinkedIn to become their platform in employment analytics. They will make their money from employment analytics, advertising, and providing value added services to the educational market. Google also invests over $1 billion in free, open nonprofit courseware platforms to increase the rate of commoditization of education.

Education becomes a feature of Google’s overall platform. Similarly, Amazon.com expands their Prime and Kindle Unlimited subscription service to add thousands of textbooks and apps to become their courseware platform. Microsoft and Apple follow suit adding educational products as features of their subscription platforms to become their courseware platform.

Students will be able to use and purchase additional value added educational services beyond the subscription services through something like an app store. They will be able to get for free, through subscription service, or à la carte purchase: courses and competency units that bundle books, video lectures, tutorials, interactive games, other course materials, tutoring, mentoring, third-party internship placements/study abroad experiences, and thousands of other enhancements. This app store will commoditize these materials so that most courses and competency units will range in price from free, subscription, to a few dollars, or more. Many courses will be bundled with a competency-based exam that will offer credit. This credit will be tied to national and international architected curriculum standards in all major subjects through Bachelor’s level education and many Master’s level education. Students will be able to customize potentially thousands of micro-courses into their overall degree.

Competency-based education will enable large-scale adaptive educational systems. An adaptive competency-based system would be able to quickly test a student’s competencies across hundreds of subjects and identify “holes” in their knowledge maps. Rather than learning an entire subject, students only need to learn the concepts that serve as micro-prerequisites. Early versions of these systems are already available in Khan Academy and other adaptive learning systems, which provides a knowledge map of concepts on each subject tied to national curriculum frameworks. Students can then go back and relearn any concepts that they have not mastered. Students will be able to have adaptive, competency-based courses with the best lectures in the world.

While many students will still pursue degrees, the more important factor will be their employment competency profiles that provides their employment analytics. Their employment profiles will be an incredibly detailed resume/curriculum vitae, which will be a part of their social network profiles that they can make available to employers. Each person’s competency profile could include potentially thousands of data points including competencies, badges, course grades, personality tests, reviews from past employers and clients, and other information. Employers posting jobs could then post detailed competency profiles. Machine learning systems will then do pattern matching to match employees to jobs based on detailed profiles.

The goal of the courseware providers will be to essentially disintermediate accreditation by providing data-rich profiles and machine learning algorithms with the goal of being more effective as an intermediary rather than the current system of accreditation and degrees. If the courseware providers are able to provide educated workers, reduce costs, increase supply, and maintain quality, then they stand a good chance to succeed as long as they also maintain a strong legal and lobbying investment.

It is likely that this technology will also be integrated with the freelance and micro-work market, which will break projects into standardized tasks that can be bid on. This will be the next evolution of the growing freelance market (elance.com, dice.com, Google Helpouts), which might create real-time bidding for hours of consultants on standardized micro-work projects. The selection of employment in many sectors will increasingly look like Amazon’s Mechanical Turk, which allows computer programmers to reference “function calls” like translating a paragraph that is conducted by people as micro-work rather than machines. For example, designing a website might involve having a computer select real time bids for the following jobs: 1) system architect 2) graphics 3) content 4) proofreading 5) marketing.

The proportion of the job market taken up by freelancing and microwork is likely to grow dramatically as it slowly disrupts traditional employment (“Microwork,” 2014). Workers and employers will receive ratings in their Employment Profile on various jobs on a mass scale in the same way that Amazon.com provides ratings of products and sellers. The likely market leader in this space will either be LinkedIn (acquired by a larger platform company) or something similar. The most likely companies to dominate this space are Google and Amazon.com, but it is likely that a couple of new entrants may achieve critical mass to be among the dominant platforms. This market for services could dwarf that of e-commerce. One could imagine a future where Google acquires LinkedIn empowered with educational competency profiles and ratings.

There are likely to be five tiers of providers in this scenario of higher education.:

1. **Tier 1. The Elite Degrees:** These schools will focusing on the top 5-10% of students (in terms of wealth and aptitude). The elite will use courseware company tools, but they will add value in other ways that make the experience worthwhile. Tuition in the top tier could cost from $150k-200k per year at private schools to $100,000 per year at the top tier state schools (in today’s dollars). At the very top tier of these schools are likely to have the endowments and resources from their brand that will enable them to scholarship a significant number of students. The best analogy for this tier might be to pay cable TV’s response to streaming video in the United States or the top tier newspapers like the *New York Times* and the *Economist’s* response to online journalism.
2. **Tier 2. High Quality Moderate-Cost Degrees.** This tier will attempt to follow the strategy of the U.S. retailer Target of providing high quality at moderate-cost. These schools will use the courseware platform, but they will add value in other ways that make the experience worthwhile. These schools will serve the next 10-15% of students in developed countries and will continue to do residential college or blended learning. Tuition in these schools is likely to cost from $50k-100k per year (in today’s dollars). Most of these schools survive and thrive by being thrifty and providing high quality education. The best market analogies for this sector might be how physical retailers have been affected by ecommerce.
3. **Tier 3. Good Enough Quality Low-Cost Degrees.** These schools will focus on the majority of the world that cannot afford the other tiers of education. Currently the best examples are College of America (tuition $2,500/year) and Western Governor’s. These schools will be tightly partnered with the disruptors. They will add value by providing accreditation, student support, repackaging/curating content for specialties, and other low-cost value added services. The cost of these degrees are likely to range from $100/year to $5,000 per year. Because of the low-margins in this business, scale will be essential. Because of this the primary core-competencies of this tier will be technology driven such as technology- driven online marketing (called growth hacking) and low-cost, efficient service provision. This tier is likely to be dominated by a few larger organizations that can effectively utilize workers in developing countries with lower labor cost. The end result is that the number of students receiving a degree in the United States is likely to increase by 50% and globally by more than 100%. The best market analogy for this tier might be Huffington Post, Business Insider and Mashable or niche ecommerce companies. Tier 3 is where the most of the disruption will happen in Christian higher education and is the focus of City Vision.
4. **Tier 4. Courseware Ecosystem Small Businesses.** There will also be a large number of small businesses that exist in the courseware ecosystem. This might be analogous to mobile app developers or small businesses selling through eBay, Amazon, or their own website. These groups will provide courseware components including apps, courses, educational content, books, certificates, student services, proctoring, tutoring, webinars, videos, and degrees. For individual instructors competing in this market, it might be more analogous to independent journalist who establish their own platforms by blogging, self-publishing, speaking, and independently writing articles for Tier 2 and Tier 3 institutions.
5. **Tier 5. Courseware Platforms.** Tier 5 is the courseware platforms themselves, which will provide their materials for free directly to students. These will be the “arms dealers” and suppliers of disruptive innovation in higher education. This tier will avoid accreditation to be able to focus on innovation, although it is likely to create an extremely competitive marketplace like an app store for accredited courses and degrees. Students getting their education directly from Tier 5 will forgo the degree credential, expecting that their employment competency profiles will eventually become a better predictor of employment success than degrees. Eventually, the platform provided by Tier 5 is likely to become the dominant form of education. The best market analogy for this is Netflix for video or Amazon, Google. or Microsoft capturing the most value from online journalism through ads.

The goal of this scenario is to provide a helpful picture to inform strategy. The following sections highlight some of the key principles that will be important for higher education in the future.

## The Importance of Courseware and Online Competency-Based Education

This study argues that the form that the primary disruptive innovation in education will take the form of “courseware ecosystem platforms.” In many ways these coursesware platform could be viewed as “educational operating systems,” combining content and software that educational services are built on. There are early signs of what these courseware platforms will look like. There are four major models developing.

* **Courseware tied to e-books.** Currently there are several vendors that provide adaptive, competency-based courseware for higher education including Pearson and McGraw Hill. These vendors provide pre-packaged online courses integrated with eBooks. It allows course developers to quickly select which lessons to include as well as add their own lessons. Each learning unit typically comes with online lessons, videos, presentation slides, an eBook chapter, adaptive learning unit as well as quiz and test questions. Currently this seems to be the best fit for the online higher education market.
* **Courseware tied to devices and technology ecosystems**. The first versions of this currently have been the Amplify Tablet (K-12) in android and Amazon’s Freetime Unlimited, which provide highly curated content. In addition, Apple’s iTunes U and Google Classroom could easily be adapted into a more comprehensive courseware system. It is likely that there will be a growing number of devices providing courseware ecosystems based on Amazon, Google (Android and Chromebook) and Apple’s platform. Currently, the tablet market is focused on K-12 education, but disruptive innovation theory would predict that it would continue to move into higher quality/value products that would eventually include higher education. One challenge of tablets is that as a technology they lend themselves more to being a knowledge consumption device rather than a knowledge production device. In addition, it appears that educational apps and gamification are most effective at early-stage education. With the limitation of tablets as consumption devices and the tendency of gamification to work more effectively at lower age levels, it seems likely that tablet strategies will need to at least be paired with keyboards and other tools to improve the effectiveness of developing knowledge production skills required in higher education.
* **Independent courseware**. There are a growing number of independent vendors of adaptive learning systems, competency based educational systems and other forms of courseware aimed at various educational levels such as Knewton, which is focused on the K-12 market.
* **Open Courseware and MOOCs**. This would include platforms like Khan Academy, edX, Coursera, Udacity, Saylor Academy, and the American Council on Education (ACE). One major limitation of these platforms is that they are direct to consumer products rather than business-to-business prospects. That means that they are not very well set up to enable third party educational institutions to customize their materials to use in courses and degrees. How open these providers are to working with third-parties providing degrees will be critical to strategy for many institutions. The ACE initiative to create 100 free and low-cost general education courses is one of the most interesting as ACE credit can be transferred to accredited schools through the ACE credit recommendation service (Paul Fain, 2014). In addition, there is a growing number of open textbooks that can be used in any course for free.
* **Next Generation Learning Management Systems.** Some learning management systems are attempting to integrate content into their systems. The best example to date is probably Instructure’s Canvas with the Canvas Network. Right now, the Canvas Network does not provide a library of content that institutions can reuse, but rather it serves more as a MOOC publishing platform for institutions using Canvas.

It remains to be seen how the courseware market will ultimately develop. It seems likely that each of these categories will exist in the future, but it is likely that market forces will lean, one or two of them will become the dominant forms of courseware. There is likely to be significant competition between the largest Tier 3 Good Enough Low Cost Degree providers and the Tier 5 courseware providers. This competition is likely to be most intense from the growing number mega-universities that have more that 1 million students.

Given that disruptive innovation theory states that disruptors typically come from outside existing markets, in the long run it seems likely that Tier 5 courseware providers will achieve the most critical mass. Similarly, disruptive innovation theory would also predict that traditional publishers are less likely to dominate in this domain. More likely is that some type of partnership between the technology ecosystem providers and nonprofit open courseware providers will dominate. Technology ecosystem providers have every incentive to commoditize online competency-based education by supporting free open courseware just as they have commoditized encyclopedias and facts through support of Wikipedia. In addition, most technology providers are unlikely to become content providers but are more likely to create the ecosystem for content providers.

Clayton Christensen Institute has stated “In contrast to other recent trends in higher education, particularly the tremendous fanfare around massive open online courses (MOOCs), online competency-based education stands out as the innovation most likely to disrupt higher education.” (Michelle R. Weise & Clayton M. Christensen, 2014). It seems likely that all of these forms of courseware (including MOOCs) in order to “cross the chasm” to mainstream use in higher education will need to become competency-based.

It’s worth stating that even the term *courseware* itself is a misnomer, comparable to how the term *horseless carriage* was first used to describe cars. Similarly, the term *higher education* is also a misleading term as in various parts of the world it often excludes non-academic forms of post-secondary education such as technical training institutes, vocational training, and continuing education. Because of this, the term *tertiary education* is more commonly used to refer to post-secondary education in the global context and is likely to better apply to the diversity of post-secondary education coming through disruptive innovation.

Today’s learning management systems show classic signs of early adopter technology that is unlikely to cross the chasm between early adopters and mainstream use ((Moore, 1991). In many ways they are analogous to early smartphones (Windows Mobile, PalmOS), which were not user friendly and required users to manually install individual programs. Apple displaced them by recognizing that the mainstream market would demand different design parameters and understood that content and apps had to be bundled with the device into a highly usable ecosystem through the app store. Similarly, it is likely that the learning management systems of today are likely to be replaced with cloud-based courseware systems that are much more usable and bundle content and services into a highly-usable ecosystem. Figure 16 shows an architectural diagram of courseware ecosystems.

**Degree**

**Devices**

**Services**

**Content**

Tablets

Smartphones

Computers

Other Devices

Figure 16. Architectural Diagram of Courseware Ecosystems.

The way architectural diagrams like this work is that any item at a given layer works with and builds on items at the layers below it. For example, the content and services should be available through a variety of devices. The services support learning from a variety of content.

**Course ecosystem layer.** At the base is the courseware ecosystem provider that is the foundation for the entire ecosystem in a role comparable to app stores on mobile phones. The course ecosystem essentially replaces the learning management system by bundling content and services with the technology into a highly usable ecosystem.

**Content Layer:** Dependent on the courseware layer will be a content layer of eBooks, videos, lectures, learning units, courses, articles, and other type of content. Much of this content will be tagged with linkages to curriculum frameworks, competencies, and preparation for specific standardized tests while some will not. There are likely to be significant markets both for subscription bundles as well as a la carte options. There are likely to be both markets to sell directly to institutions and direct to student. Many content providers will support multiple ecosystems and devices as they do for today’s app store.

**Services Layer.** The services layer will provide support services to assist the learning process. Some of the categories and vendors include testing (ETS, ACT, College Board), peer learning support (Open Study), internships and travel abroad (Internships.com, CityVisionInternships.org), proctoring (ProctorU), and Online Tutoring (tutor.com, Smarthinking.com).

All of these items will be sold direct to the consumer or through higher education institutions that bundle them with degrees and certificates. Higher education institutions are already bundling these items together on their own, but the courseware ecosystem will dramatically simplify the process just as mobile app stores have. As a disruptive technology, the courseware systems are in their infancy with limited quality and usability.

The primary uncertainty is around how bundles will form depending on how the market and regulation plays out. A key question in competency-based education is how it will provide reliable signals of a person’s competencies. One possible future is that government standards or market forces tie competency-based education to summative standardized tests from testing companies. This would likely lead to bundles around test preparation. Another possible future is that more granular measures of competencies like Open Badges become more dominant, which would likely require less bundling.

Another key area of uncertainty is which models of courseware providers will prove dominant. Given the size of the education market and the potential that courseware systems provide, it seems likely that the technology platform providers will gradually improve their products until they become formidable, but they may also choose to leave that market to the publishers. MOOC providers may make the shift to competency-based education and actively support universities to use their materials in accredited courses, and become dominant, or they may remain as they are and be eclipsed by other providers.

## Technology Will Need to Become Central to Culture in Higher Education

The primary lesson in this chapter on technology leadership principles is that leaders need to understand technology as culture and must manage it from that perspective. One of the key points of this document is that all institutions of higher education will need to make technology more central to their cultures to survive. How central will depend on which tier the institution is in ranging from Tier 1 (the least) to Tier 5 (the most). For example, the Tier 1 Elite are likely to need to become at least as tech-savvy as the New York Times. The Tier 2 Moderate Cost institutions that are most successful may not be as tech savvy as the Huffington Post but will be closer to the Huffington Post model than the New York Times. The Tier 3 will have to be extremely tech savvy and educationally savvy. The Tier 4 small businesses are likely to be more limited in scale and will have a combination of education and tech savvy but not at the capacity of Tier 3. The Tier 5 is likely to eventually consolidate into the most tech savvy organizations in the world.

There is a case study of technology leadership early in Google’s history that is critical to understand how to lead in an industry that is becoming tech dominated like higher education. Early in Google’s history, Larry Page, one of the co-founders, fired all of its project managers (Nicolas Carlson, 2014). While part of his decision could be attributed to Larry’s lack of management experience as a young founder, the real lesson comes from understanding why he did it and how Google changed because of it. He fired all his project managers because he knew that to be successful Google had to be led by techies, but he realized that the organization had become dominated by non-technical managers. Initially, after firing all its managers, Google tried to operate without any managers, but failed. Finally, the new CEO, Eric Schmidt, actually listened to why Page fired the managers. Page believed that the dominant culture of the organization had to be led by technologists. Google then started hiring managers again, but only hired managers that came from technical backgrounds. What they were effectively communicating is that their dominant culture was technology, but they would accept bi-lingual, bi-cultural management. It is very likely that Google could not have been a success without both the insistence on having a technology-dominated culture and being willing to utilize the strengths of bi-lingual, bi-cultural management.

In many ways, the above story represented what happens when colonial countries or bi-racial churches are dominated by a particular racial, ethnic, or language group. Frequently, the group that was dominated eventually gets into power. Often, the first response is for that group to go too far in reaction, so the oppressed become the oppressors. For example, I’m familiar with a church that had been predominantly made up of non-Hispanic White English-speakers, with changing neighborhood demographics becomes a church of more than 90% congregants with Spanish as their first language. Eventually, the Spanish congregants become frustrated with services being in English and all the power being held by the English speakers, so they secure power in the church. They then switch all services to Spanish. and the English speakers quickly leave. Churches that are effective in managing this switch come to a solution similar to Google’s. They recognize that they will be a Spanish dominant church, but they will provide translation to non-Spanish speakers and have some English services. To rise in leadership in the congregation, it would obviously be helpful to both be able to speak Spanish and to be fluent in Latino culture. In other situations where there are more English speakers, similarly the church might translate into Spanish or offer Spanish services, and leadership might also need to be bilingual.

Just as an increasing portion in the United States Spanish is the dominant language, there is an increasing portion of the world that is being dominated by technology. A pastor in a neighborhood that becomes Spanish-dominant, to be effective, will either need to learn Spanish or move to another neighborhood. Similarly, if an organization is in a sector that becomes tech-dominant, then that organization will either need to make technology a dominant value in the organization or needs to move to another sector.

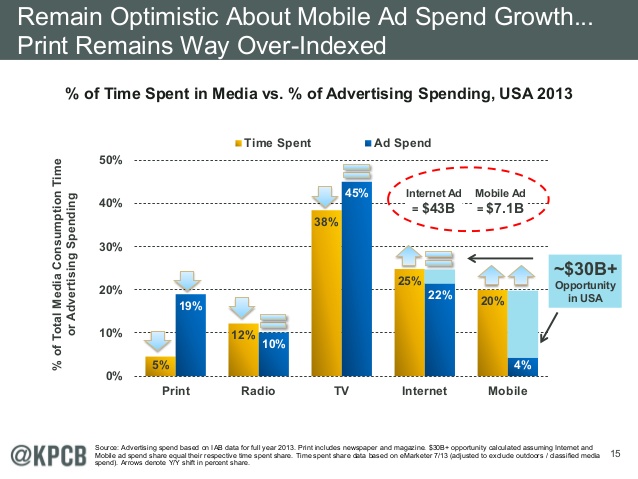
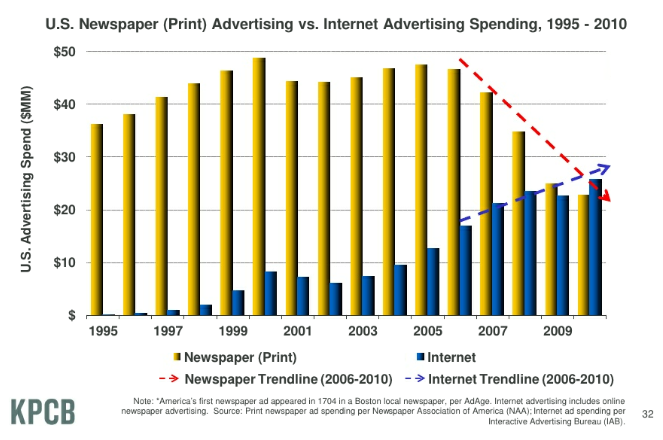
Figures 17 and 18 show the transition of both the journalism and newspaper industries based on their primary revenue driver of ads (Sonderman, 2012). Figure 18 shows the decline of newspaper advertising compared to online advertising. Figure 17 shows that one of the major drivers of this has been how people spend their time.

Figure 17. % Percent of Time Spent in Media vs. % Advertising Spending

When the field of journalism became tech-dominant, most of the value has been captured by the companies with the most tech dominance (Google, Yahoo, Microsoft) and the companies that combine extreme tech expertise with moderate journalism expertise (Huffington Post, Business Insider, Mashable) or moderate tech expertise with the extreme high end of journalism (New York Times, The Economist).

Figure 18. U.S. Newspaper advertising vs. Internet Advertising Spending

The reality is that higher education is becoming a tech-dominant sector. This is most reflected in the growth of online education as shown in Figure 19, which shows the percentage of students that have taken at least one online course (Allen & Seaman 2014).



Figure 19. Online Enrollment as a Percent of Total Enrollment

Figure 19 shows the trend line of the growth of online education seems similar to the growth of online advertising. In other words, higher education is slowly becoming a tech-dominated sector. As that happens, leadership in higher education either needs to become fluent in technology or move to another sector.

As this transformation of higher education happens, it is likely that there will be similar shakeout with the most value globally being captured by the most tech-dominant companies, with another tier combining extreme tech expertise with moderate educational expertise, and finally a tier of the elite. What proportion of the value is captured by each tier in higher education is likely to be different than in journalism, but the overall trend will be the same of more value being captured by the more tech-dominant organizations.

## Low-cost, low-touch, high convenience vs. High-cost, high-touch, high community

Each of the different tiers will need to decide where in the spectrum it will be between the low-cost, low-touch, high convenience of the Tier 5 courseware platforms vs. high-cost, high-touch, high community of Tier 1 Elite. The reality is that Baumol’s cost disease makes high touch and community prohibitively expensive in developed countries. The overall trend of disruptive innovation in higher education is likely to be one from high-cost, high-touch, high community to lower-cost, lower touch and high convenience.

One industry case study that might be particularly helpful for forecasting the future of traditional higher education is traditional journalism vs. online journalism. There are largely four models of journalism that have been succeeding.

**Google Model.** Google, Yahoo, Microsoft, and other tech dominated companies are capturing the most value in the new journalism model as aggregators. Their primary competency is in aggregating large amounts of information and presenting it in a user-friendly way.

**Huffington Post Model.** Huffington Post became the top online news site primarily by blending extreme savvy in journalism with extreme savvy in technology. It could be argued that its core competency is in getting journalists to write excellent articles for it for free or next to nothing. They combine this with some of the top journalists in the industry to create a high-quality, high-volume, low-cost, free business.

**Social News Model.** This includes sites like Business Insider, Mashable and the Next Web where their core competency tends to be their technical expertise and repackaging of existing articles to maximize their viral nature. They typically employ a few writers that write articles rapidly based on the most viral news of that day in a low-quality, high-volume, free business.

**High End Model.** This includes the Economist, New York Times and Bloomberg that invest in original news stories of the highest quality. While many companies have attempted to adopt this model, it appears that there is only room in the market for very few as the financial challenges at the New York Times is demonstrating. This is a **highest-quality, high-cost, high-price business.**

There are common threads with all of these examples. First is that they all had to grow dramatically in their technology competency. Second, they all had to dramatically cut their cost structures relative to journalism historically. Third, the end result for journalists was that there was a dramatic loss of jobs that closely mirrored the job loss rate in manufacturing industries (Mandel, 2009). Fourth, the overall industry grew, but many of the market leaders were replaced with others with stronger core competencies in technology.

## Unbundling the University

One major trend is that more components of universities are becoming unbundled and disaggregated. This follows a trend identified by Clayton Christensen of disaggregation of industries over time (C. M. Christensen & Raynor, 2003). In many ways this reflects the same trend of the vertical computer solutions in the 1980s, changing into the horizontal computer industry where there was competition at each level of sales, applications, operating system, computers, and chips. Andy Grove, the Chairman of Intel, discussed how they made this transition in the book *Only the Paranoid Survive* as shown in Figure 20 from this book (Grove, 1999). As computers became modular based on the open architecture promoted by IBM, the primary competition moved from vertical solutions to horizontal.

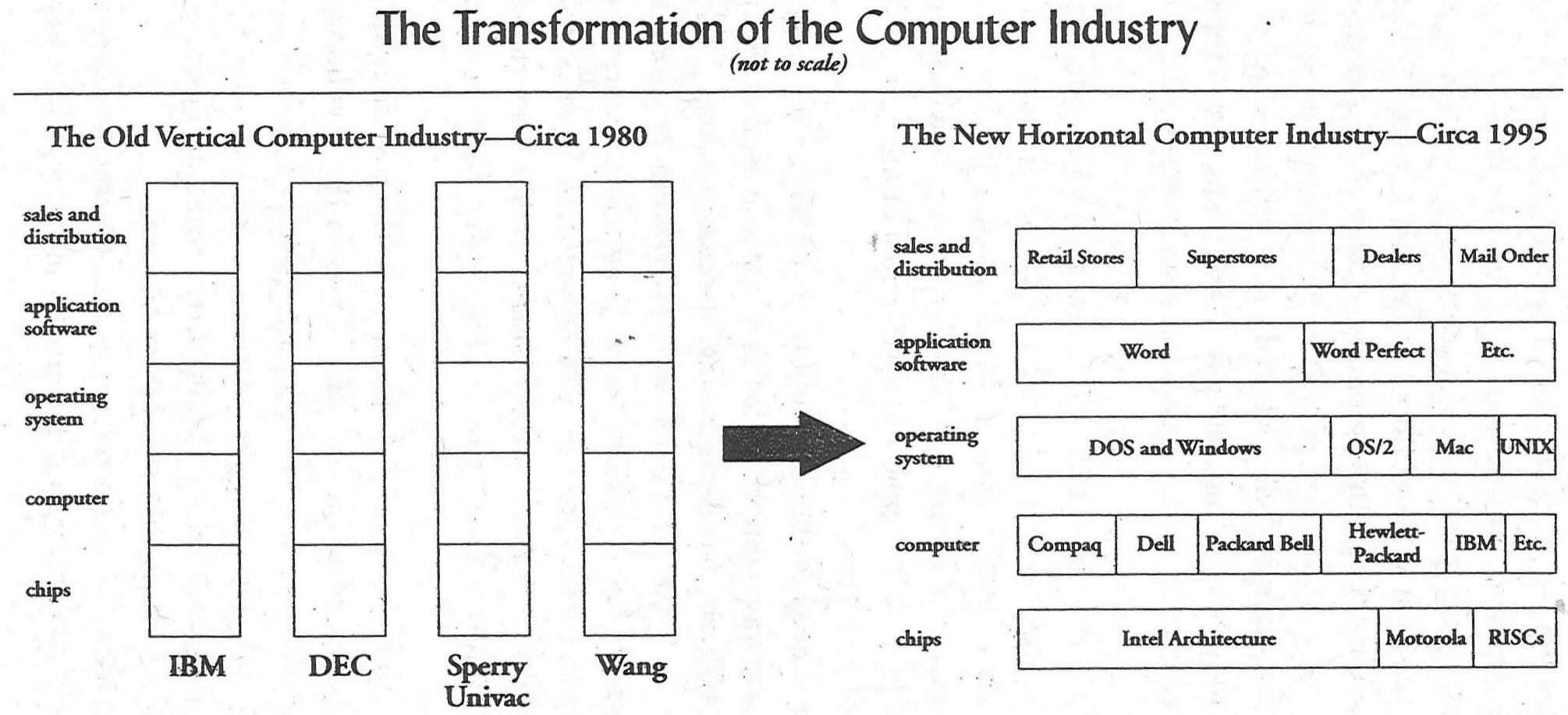


Figure 20. Vertical Computer Industry vs. Horizontal Computer Industry

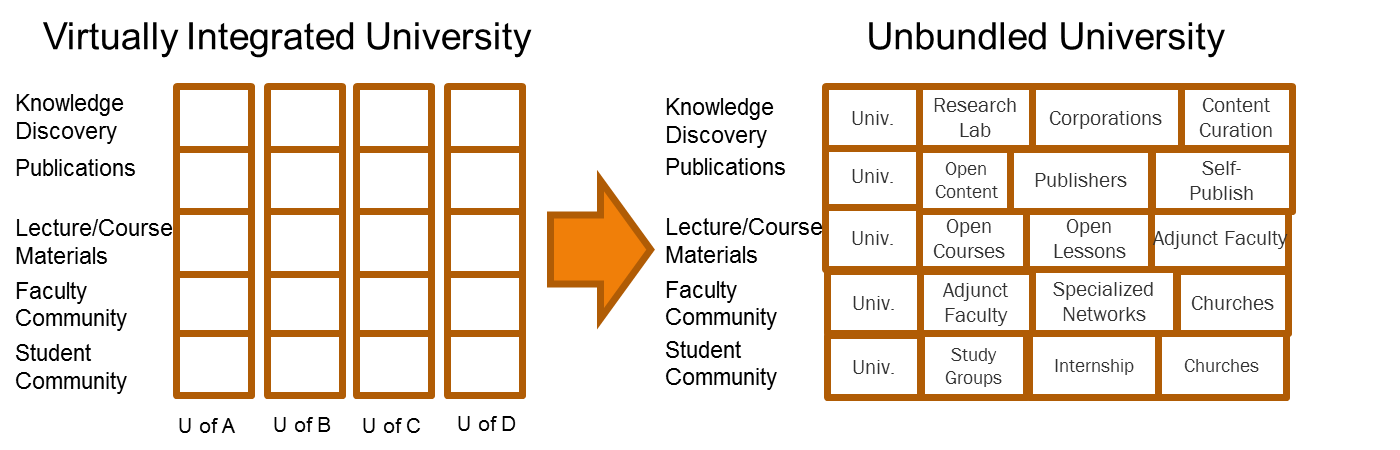


Figure 21. Vertical Integrated University vs. Horizontally Integrated University

Much of the disruption in higher education is coming from a similar transition from a vertically integrated university that tries to be all things to all people to an unbundled university where there are more options at each level. The research level universities are increasingly in competition with independent research labs, corporations, and individuals. The publishing industry is being disrupted by competition with open content and self-publishing. By far the biggest area of disruption is that of the tenured faculty lecture and course content that is being disrupted by competition from open courses, open lessons, adjunct faculty and private companies. It may be that the live lecture goes the way of live music after the phonograph was invented. There will still be some lectures just as there is still live music, but the majority of music people listen to is recorded. Christian faculty increasingly are finding their community not as much at their own university but through specialized faculty networks, conferences and churches. Christian students may get their primary community from the university, but they may also get it from peer study groups, internships, churches or Bible studies.

In the transition for the computer industry, the smart companies realized that they had to stop competing at all the levels. Universities and colleges should take the best components of each level and present them to their students. This can be done in a bundled way, as computer manufacturers do, or using a la carte approach where the school provides core components, but may leave it to students to assemble the other components (such as electives).

At City Vision, we have unbundled the following components of our education

* **Freshman and Sophomore year.** We outsource the first two years of our college to Straighterline, which can provide them for $999 per year. In addition, we are actively seeking partnership with non-traditional Bible schools and ministry training centers to provide Prior Learning Assessment for experiential learning.
* **Community.** We recognize that as an online institution, we cannot be the primary community for our students. Our City Vision Internship program enables students to work as an intern 30 hours/week at a ministry, which then pays for their tuition. The internship then becomes their primary community, and we play the role of matchmaker. Except for department heads, we use adjunct faculty that are also practitioners.
* **Housing.** For our interns that have to relocate, we do not attempt to provide housing, but instead play the role of matchmaker for housing with Christian roommates. We identify large churches in cities that may have other Christians looking for roommates and have also found that Craigslist is surprisingly a good place to find Christian roommates.
* **Content.** Much of our Master’s program is assembled using open content. Our primary form of research is content curation. We understand much of online content has been commoditized, and the primary value is in curating existing content and expertise into helpful products.

Our unbundling strategy follows many of the practices of the “sharing economy.” Companies like Uber and Lyft simply match people with cars with those needing rides and provide an alternative to taxis. We match students with Christian roommates and provide an alternative to dorms. We match students to internships in Christian organizations. These interns then study online while doing their internship at an organization that provides an alternative to the campus community. The same principle applies in other aspects of our strategy. We value community but recognize the limits of online community and believe that it is more effective to use online tools to match students for offline community.

It’s worth stating that while the horizontally integrated computer industry of Microsoft and IBM-compatible PC’s was dominant in the early stages of the diffusion of innovation of computer technology with early adopters, the vertically integrated strategy used by Apple became more dominant in reaching the early and late majority. Even beyond that, Google’s Android operating system combines some of the strengths of being vertically integrated since Google has implemented much more control over software standards, applications, hardware and device configuration than Microsoft, while also reducing costs through the horizontal partnerships with other hardware vendors. In terms of global market penetration, it appears that Apple will dominate Microsoft, but Google’s combined approach will dominate them all.

There are important lessons from this for higher education. It is likely that early adopters and lead users in disruptive higher education may be willing to get their degrees piecemeal; however, later in the innovation cycle, it will be important to have a complete easy to use product. From this example it seems likely that higher education approaches like Google’s that combine vertical and horizontal strategies where needed will become the dominant form globally.

## Christian Technology Leadership Principles and the Field of Media Ecology

Much of the context presented in chapter 3 could be summarized as follows:

* A driving force of history is to increase productivity.
* Higher education has had very little productivity gains compared to the 60 times productivity gains of the average worker.
* A convergence of many factors is making it highly likely that higher education will experience disruptive innovation.
* Christians should learn from as many possible sources and maintain our Christian values in determining the most helpful response.

The problem with the first 3 parts of this argument is that they describe the “is” but it does not reflect on the “ought” that we would need for point 4. Many people would agree that there are tremendous pressures causing the world us to go down a road toward a technocratic society (the “is”), but they would not agree that this is where we should be going (the “ought”). One of the fields that provides a very helpful framework for thinking about the “ought” is the field of media ecology. Media Ecology is “the study of media environments, the idea that technology and techniques, modes of information and codes of communication play a leading role in human affairs” (“Media ecology,” 2014). The field was popularized by Marshall McLuhan with his famous quote, “The medium is the message” (McLuhan, 1996). The idea behind the phrase “the medium is the message” is that form of various media (i.e. radio, television, and print) changes overall structures of society and how we think as much or more than the messages they convey.

What is interesting about this field is it seems that a disproportionate number of the top thinkers in the field have been Christians (Marshall McLuhan, Jacques Ellul, Walter Ong, Albert Borgman) as well as others with strong religious faith such as Neil Postman, who is Jewish (Reynolds, 2001). One possible reason for this is that in many ways religion provides a right-brained refuge from the growing left-brained, rational technocracy in the world. This is important to recognize because it could point to the idea that as higher education gets disrupted through technocratic methods, there could be a growing demand for an alternative that Christian higher education could provide if it positions itself correctly.

Jacques Ellul was both a strong Christian and played a key role in creating the fields of media ecology and philosophy of technology (“Jacques Ellul,” 2013). He defined a concept he called technique as “the totality of methods rationally arrived at and having absolute efficiency in every field of human activity" (Ellul & Merton, 1967). This concept of technique parallels what was discussed in chapter 3 about the inevitable drive toward increasing productivity, which is now bringing us to the point of a future of large-scale automation and long-term technological unemployment.

It is critical for those involved in disruptive innovation to understand the theological arguments against this type of endless drive toward productivity. Otherwise, Christians risk falling into the idolatry of transhumanism and the technological singularity vision of Ray Kurtzweil (“Technological singularity,” 2014). This vision replaces the Gospel with a vision of that heaven can be achieved through a materialistic acceleration of technological improvement until humans and machine merge, and our consciousness can be downloaded into the “cloud” where we can live forever. Any attitude that replaces our trust in God with trust in technology is falling into the same trap as happened in Babel thinking that we can use our technology to become like God.

While there is much to learn from the field of media ecology, one weakness with the field is a weakness of all fields based in criticism. The field of media ecology largely emerged out of the field of literary criticism but evolved to become a field of media and technology criticism. As a field grounded primarily in criticism, it has both the strengths and weaknesses of other fields that are based on that framework. The strength of a field of media criticism is that it is largely correct in its critique of problems. The weakness of a field like media theory is that critics typically are not very good at offering a better solution than what they criticize. There is obviously a key role for the critic as they are more analogous to the biblical role of the prophet; however, typically, critics do not make good culture builders and prophets do not make good kings. This is because kings must be good at choosing and implementing the best solution, whereas critics identify problems.

The field of media ecology is largely correct in its assessment of the problems of technology and its influence on society, but it is not as effective at proposing viable alternatives. Many solutions range from Christian anarchism, withdrawing into nature or some sort of attempt to withdraw partially or completely from society. These types of solutions runs counter to the theology of being “in the world but not of the world.” To completely resist disruptive innovation in higher education is likely to lead to the same results as a farmer that completely resisted any type of machinery. Most farmers who took that approach became increasingly poor and isolated from the world. One can follow the path of the Amish, but again that runs counter to theology that requires deeper engagement with the world.

What is needed in the field of media ecology and in leading technology change in higher education are more people who are fully bilingual and bicultural across both cultures: technologists who are fluent in media ecology and theology. Having worked in Black communities, I have learned that the most effective leaders to critique and bring change to the Black community are Black. If a White European-American went into the Black community and tried to explain to them everything they were doing wrong, that person would largely just make people angry and be ignored. The field of Christian media ecology runs a similar risk if it becomes too dominated by people who are not technologists, know very little about technological culture, and appear to be technophobic. This is not to say that the criticisms of such people are incorrect, but if the field of media ecology is dominated by non-technologists, it risks being counter-productive or ignored.

Similarly there is a problem if Christians just talk about technology. Similarly, many Christian technologists are unbalanced and are technophiles that look to technology for all solutions. What is needed is a balanced theology of technology from technologists who are scholar-practitioners—versed in media ecology and Christian theology.

John Edmiston, who teaches our Theology of Technology course is a good example of this. He is trained as a theologian and is well versed in much of the field of media ecology, but he has also spent several decades using technology in cross-cultural missions contexts. He is acutely aware of both the potential and dangers of technology and routinely gives talks from both perspectives. Another good model of an effective Christian media ecologist is John Dyer, who wrote what is probably the best Christian book on theology of technology in *From the Garden to the City.* John is able to understand both worlds because he works as a computer programmer at Dallas Theological Seminary but is also trained as a theologian. A third model bridging both cultures is Kevin Kelly, who in contrast to the previous two examples, primarily serves a secular audience. His credentials in the “back to nature” crowd are impeccable as former editor of the Whole Earth Catalog, which became the “bible” of the back to nature crowd in the 1960s. His credentials as a technologist and someone who understands technology culture are also impeccable as the cofounder of *Wired* magazine, one of the most popular technology magazines. His writing such as the book *What Technology Wants*, reflects both an amazingly deep understanding of the strengths of technology and its limitations (Kelly, 2011).

As a digital native, in my own reading of the field of media ecology, I notice a distinct difference between those in the field who are technologists and those who are not. I think many of the harshest critics of technology do not appear to understand in internal experience of a technologist in the same way a White person cannot ever experience or fully understand the internal experience of a Black person. Given what Ellul experienced when Nazis took over Europe, my personal view is that it is understandable that he might view technique as an almost inevitable march of evil. While technology does create much evil, the question is how to best respond. One response is to withdraw, but a better response is to engage—become an active participant to shape the world of technology through mastery of the field.

At TechMission, our approach to technology is very similar to the approach that Andy Crouch, editor of *Christianity Today*, proposes toward culture in his book *Culture Making*. Crouch advocates that instead of just consuming and copying culture or resisting culture as was done in the “culture wars,” Christians should work to create culture (Crouch, 2013). Similarly, at TechMission we believe that rather than just consuming technology or resisting technology, Christians should use technology to shape the world for God’s purposes. The goal of our Master’s in Technology and Ministry is to raise up leaders to do this. The reason our degree is called “Technology and Ministry” is that we believe that where there is a role for the critic, there is a larger role for the “ministry” of using technology for God’s purposes. Like Jeremiah, we must root out, pull down, and throw down, but also plant and build up (Jer. 1:10).

Leaders in Christian higher education should take a similar approach in how they employ “disruptive innovation” coming from technology for God’s purposes. They need to be fully aware of the strengths of traditional education and limitations of technology, but they also must be a master of technology in order to know how it can be used effectively. Leaders need to be steeped in the tradition and values of traditional Christian higher education and have mastery of technology and the concepts of disruptive innovation in order to decide how technology can be used within those values.

# Chapter 5: The Unique Role for Christian Higher Education

## Essential Elements of Christian Educational Institutions Providing Online Education

There have been many books and articles that have covered the history and unique elements of Christian higher education ( Holmes, 1987; Ringenberg, 2006; Carpenter, Glanzer, & Lantinga, 2014). There have been fewer attempts to describe the essential elements of Christian online education ( M.R. Miller, 2014; Donovan, 2014). The reality is that disruptive innovation is bringing such a change in the landscape of higher education that Christian higher education institutions need to rethink their value proposition and reason for being. If all a Christian institution does is to put a “Christian” brand on a secular degree, then it is not a Christian educational institution, but a secular institution misappropriating “Christian” as a branding strategy for a particular market segment. Similarly if a Christian institution only provides Christian knowledge without involving any relational component to shape character then it is not a Christian educational institution, but is a Christian publisher. Based on these concepts, there are four essential elements to online education to be considered a Christian educational institution.

1. **Christian Worldview.** The content in courses must be curated by a Christian institution in order for it to remain constant with Christian values and worldview. This comes from the concept described above that Christian elements come more from the selection of what subjects and topics to emphasize and the conclusions, metanarratives and worldview that results from that.
2. **Christian Content in Key Areas.** At least some courses and content must be developed by Christians. Few would argue that all college level math textbooks must be written by Christians. Most Christians would agree that books and courses on topics like New Testament survey are best taught by Christians, because otherwise they examine the Bible through a secular worldview. There is a lot of variation between one extreme saying that all college math textbooks need to be written by Christians and the other extreme that it is permitted to have Bible classes taught by non-Christians. Where between those two extremes an institution lies will be up to each institution. The general principle is that if a Christian institution would use a secular textbook on a subject, then it is likely to use secular courseware for that subject.
3. **Christian Relationships.** There must be some significant relational elements with Christians to the program. God chose to bring salvation through Jesus who was incarnated rather than simply sending us a message. It seems that He has done this because life-change that brings salvation happens most often through relationships. Christian educational institutions that do not support nurturing relationships that bring life change and build character are essentially publishers. There are many ways for these institutions to provide this community: sometimes that will be through online community through courses, but even more often it might be through blended/hybrid learning, internships, and educational travel experiences.
4. **Care for Stakeholders.** Christian organizations should reflect Christian character of showing compassion and care for all stakeholders including students, faculty, staff, partners, and anyone the organization interacts with.

In addition to the essential elements of Christian higher education, it is also important to consider its essential functions. Clayton Christensen explains that the core functions of any higher education institution fall into three generic business models (Michelle R. Weise & Clayton M. Christensen, 2014):

* Solution Shop: Diagnoses and solves unstructured problems (e.g. knowledge discovery or research)
* Value-added process business: adds value to something that is incomplete or broken (e.g. knowledge proliferation or teaching)
* Facilitate user network: enables exchange among participants (e.g. social growth)

These could be translated into the Christian higher education context as follows.

* Research and consulting
* Knowledge production and transfer
* Christian community and character formation/discipleship

A key question to consider is for each of these functions is what aspects of them are better done by a Christian institution than a secular institution. In our Theology of Work course, we teach students that every Christian in every job is involved in ministry every second of their lives. There are many cases where being the “church scattered” and doing these functions in a secular context is preferred over being the “church gathered” in a Christian institution. Because of this, it is important for Christian institutions to think about what components of these functions need to be core to their businesses. This point will be discussed in more detail in section 7 of this chapter.

## Unbundling Character Formation from the Knowledge Transfer

Understanding the different functions of Christian higher education provides a good framework for understanding how parts of those functions are getting unbundled. It is likely that the Internet’s impact on education will be similar to how it has impacted television, which is that television is getting unbundled. People who lived before cable and satellite television had no choice but to be “fed” from the three channels on television (ABC, CBS and NBC). When cable and satellite television came, they could watch what they were fed on one of the 100 channels. The nature of the technology was that it was very difficult for parents to filter what children watched. The result was that the television was essentially an assimilative force to values that help sell products (commercialization, sexualization, violence, etc.).

With the Internet, proactive parents can enable their children to only watch the shows they want them to watch on Netflix. My experience is that many children do not even know what a commercial is. While the filtering still has a ways to go, parents are much better able to control the assimilative nature of the media their children are exposed to. In essence, they are controlling the media diet of themselves and their children.

For years, going to a secular college for Christians represented entering an environment where they were fed highly assimilative secularizing content with values hostile to Christians. Just like with television, this is likely to change. In this model, residential colleges are like cable TV where the content is still largely pre-programmed but with a few more options. For secular institutions, control over learning plans and content will still be controlled by institutions with values counter to Christian values.

As tuition continues to rise in residential Christian colleges, fewer students will be able to attend. There will be a growing pool Christian students whose families are wealthy (top 20% of income) that will face three bad choices: 1) attend a Christian college and go into life-altering debt, 2) attend a lower-cost secular school and be exposed to the extreme secularizing forces. Groups like Intervarsity and Cru have developed an effective strategy for serving students at secular schools by adding a character formation and discipleship elements to secular schools. The campus ministry plus secular school is essentially an unbundled competitor to the vertically integrated model of traditional campus-based Christian higher education.

For the remaining 80% of students who attend non-residential schools, it is likely that Christians could better shape the content of their own education. Their experience will be more like Netflix. Online Christian colleges can become experts at re-bundling courses into packages of value for students. They essentially become curators of content that reinforces Christian values while preparing students for the job market. Parents and students will both have more say about what courses and content they get rather than being force-fed content inconsistent with their values.

The industrial age model of force-feeding students secular content only works in a centralized educational framework, but the Internet is breaking that down. Today, higher education represents an enormous secularizing force of Western culture. In the future, higher education will be decentralized to represent the cultural diversity reflective of the demographics of the world. Rather than a tiny elite of Western academics defining the culture of academia, the culture of global academia will reflect religious diversity (including two billion Christians) and more than a billion each of Muslims, Chinese, Indians, Africans, among many other people groups. Our job as Christian leaders in higher education will be to ensure that the diversity of voices in the long tail of the global Christian community is as visible and as influential as possible in a future pluralistic world. Christians have much to gain in the free marketplace of ideas. In that world, it will increasingly look as if the tail (secular Western elite academia) is attempting to wag the dog (the rest of the word).

The primary challenge facing Christian higher education is that Baumol’s cost disease is decreasing the emphasis on relationships and community in Christian higher education. This problem also presents an opportunity because secular higher education is facing the same challenge. One significant opportunity that these courseware platforms will bring is that they unbundle character formation from knowledge and skill transfer functions of education. This presents a tremendous opportunity to Christians and offers the potential to reverse the secularization trend of higher education. Courseware platforms essentially commoditize knowledge and skill transfer. As knowledge and skill transfer becomes commoditized, character formation becomes much more essential.

A strong partnership between organizations often happens when they have different but complementary core competencies. The core competency of courseware platforms is in knowledge and skill transfer. The core competency of Christian organizations should be in changing lives through the Gospel. The job market wants people with soft skills (character) and hard skills. Christian institutions should have a competitive advantage in preparing people for the job market in that Christians specialize in character development.

The Christian college of the future might look more like groups like Youth With a Mission (YWAM) than traditional Christian higher education. YWAM specializes in discipleship and helping youth get on fire for God. There are millions of churches that do the same. While governments took education out of the Church, there is the potential that technology could increase the role of churches and parachurches in education. The advantage of groups like YWAM is that they can provide the spiritual community of young adult peers that is essential to forming identity. Groups like YWAM may lack the academic rigor needed to provide a degree, which makes it the ideal partner with low-cost online Christian degree programs, provided ministry-leaders value life-long learning for service.

The challenge is that most existing Christian higher education institutions are vertically integrated. In addition, their organizational design is optimized for knowledge transfer, skill transfer and character formation. Many other Christian organizations are much more optimized exclusively on character formation and have much lower cost structures. These organizations might be better positioned to benefit from the coming courseware platforms because their core competencies complement rather than duplicate their functions.

It would be a mistake for Christian institutions to outsource all of their knowledge functions to courseware platforms because of the secular nature of those platforms. It will be important to make hard decisions on which components can be outsourced and which cannot. Christian higher education institutions are likely to have a much more difficult time choosing to outsource non-essential knowledge and skill transfer functions to courseware platforms. They may take the vertically integrated approach of insisting that all subjects even math and physics use courseware developed by Christians. Clearly there are many subjects that should not be outsourced to secular companies such as those that fall under religion, some social and behavioral sciences, or other topics that impose values opposed to Christian values.

To understand what educational components need to be core competencies, it is necessary to understand media bias. Noam Chomsky, who is probably the world’s expert on propaganda, has explained that media bias often does not come from the facts being wrong, but in choosing which facts to emphasize, which to ignore and what conclusions to develop based on those facts (Chomsky, 2008). One of the strengths of courseware systems is that many components of them are modular. Because of that, Christian institutions can still use much of the content of courseware systems without accepting much secular bias. The core competencies of Christian institutions should focus on what subjects and topics to emphasize and the conclusions, metanarratives, and worldview that result from that. It is worth noting that just because content is “Christian” does not mean that it follows a Christian worldview as the Pharisees had the same Scriptures (facts) as Jesus; they just emphasized and interpreted them differently. Similarly, it will be in the selection, curation, emphasis, and interpretation of courseware content that will determine whether it follows a Christian worldview.

## How the Long Tail and Unbundling Replace Cultural Assimilation with Acculturation

In addition to unbundling character formation from knowledge/skill transfer, there will also be an unbundling of cultural assimilation from knowledge/skill transfer. In addition to providing knowledge and skills, education also plays the role of cultural assimilation, and those who want an education have no choice but to be subjected to assimilative culture of higher education. This assimilation happens especially across class to middle-class culture (described in more detail in Appendix C. 1.). It also includes religious assimilation to a secular worldview and cultural assimilation of racial/ethnic groups. Churches also perform a cultural assimilation from the values of the world to God’s values. My experience is that the problem is in vertically integrated institutions, the cultural assimilation happens across all the dimensions at once, assimilating away useful, positive cultural elements as well as negative.

Currently most people that want access to jobs must submit themselves to a higher education that will attempt to assimilate them into the values of the dominant culture (White, Western, middle-class, secular). My experience is that this is why many groups have been resistant to higher education. Christian parents fear that their children will leave the faith because of the secular assimilation of higher education. Black teens are teased that if they go to college it will make them White. Those in developing countries fear that it will make them Western. Higher education performs an important function of assimilation to cultural norms that are needed to function effectively in the business world. In a vertically integrated model, there is no way for individuals to get what they want (access to jobs) without submitting to unhelpful and even abusive forms of assimilation. Christian educational institutions in countries where they are one of the only forms of good education are often criticized for the fact that to get their education non-Christian students are subject to a Christian worldview. Secular educational institutions do the same and their assimilation should be subject to similar scrutiny.

Courseware platforms will present an opportunity to unbundle harmful forms of cultural assimilation from the knowledge/skill transfer. A Christian education might both assimilate people to God’s values and to norms needed to be successful in business, but also allow for the diversity of perspectives that come from global Christianity. It does not make sense that Christian academia rests on a White, Western, publishing industry when more than 70% of Christendom is outside the Western world (Todd Johnson, 2014). The commonly used example of what to avoid in cross-cultural ministry is Western missionaries dressing indigenous leaders in developing countries in Western suits. While many view this concept with disdain, there are both pros and cons to dressing indigenous leaders in suits. On one hand, if someone from a developing country wants to interact according to international business norms, they need to have a suit and be able to wear it in the appropriate setting. On the other hand, it would be considered a tragedy if the indigenous leader assimilates and starts wearing suits all the time and imposes that to others within their culture.

I personally face these complexities in knowing how to relate to academia overall. I come from a lower-class background. In many dimensions, educational standards appear to be a form of class assimilation. It is critical to teach indigenous leaders to meet the norms of academic culture for them to have a voice in the currently dominant academic culture, but I believe that Christian leaders in higher education should only do so to the extent that they show their proficiency in that culture. If we force their primary communication style to be in academic culture more than is necessary to demonstrate proficiency, then Christian leaders in higher education risk being like the assimilative “Western suit” missionaries.

Part of what makes this a particular challenge for me is that much of the focus of my dissertation is that disruptive innovation is likely to dramatically change the norms of academia. In other words, the standard of the future is unlikely to be the “Western suits” of Western academia. I recognize that some of the reason for this is that the new standards do not yet exist. Part of the intent of the development of our Master’s program in Technology and Ministry is to prepare people for the world of the future, whereas, based on my observations, many academically focused programs are preparing for a world that is unlikely to exist in the future.

Christian higher education is in both the business of knowledge production and the ministry character formation. The knowledge production business has been disrupted, so it is critical that leaders in Christian higher education understand the new models of knowledge production. In *The Wealth of Networks*, Yochai Benkler (2007) provides what is probably the best theory to understand the economics of networks and social production. He starts by providing an overview of the basic economics of information production including peer production and social production. The economic basis he provides explains much of how Wikipedia, Facebook, YouTube, open source, social networks, and open content work. In the second part of the book he looks at how these new technologies and models of production are affecting political concepts like property and the commons. He concludes by explaining what is at stake in the overall battle of the institutional ecology of the digital world and how law and policy can both help and hurt the development of a healthy ecology.

Technology will present the biggest opportunity for growth because it enables something called “the long tail.” *The long tail* is a term coined by Chris Anderson (2006), to explain how the Internet has expanded access to many more products, which comprise the long tail. For years, business students have been taught the Pareto Principle, which says that 20% of the products provide 80% of the profits. The Internet has changed this significantly as shown in the paper "Goodbye Pareto Principle, Hello Long Tail" (Brynjolfsson, 2011). While it is still too early to predict the long-term change, it seems likely that the Internet will change the Pareto Principle from 80/20% to 60/40% in many markets.

This will have enormous impact on the diversity of content available. This is discussed extensively in the book *The Long Tail.* The long tail also explains some of the advantage that Netflix had over Blockbuster. In the video market, for Blockbuster Video 80% of rentals were recent “blockbusters,” and they only carried 75 documentaries; for Netflix 30% of rentals are “blockbusters,” and they carry 1,180 documentaries. Amazon carries 17,061 documentaries (of a possible 40,000) (M. D. Smith & Telang, 2009). This is even more dramatic on search terms. On TechMission’s websites, the top 500 search terms provide 19.5% of visitors, while the next 604,916 search terms provide 80.5% of visitors.

The reason this is important is that minority voices are almost all on the long tail. As the Internet and technology extends the long tail, it increases the proportion of minority voices. At TechMission, our strategy has been to empower minority voices by helping to provide technology tools to put their content online. Our website, UrbanMinistry.org, has over 150,000 items of free content including thousands of talks from the top conferences for Christians serving the poor. Our data showed that many of the talks from these conferences reached 10 times the audience online than they did in person. The larger impact on enabling diverse voices is being felt through tools like YouTube, blogs, Wikipedia, self-publishing, e-books, open publishing, free journals, etc. My opinion is that unfortunately much of academia is based on a culture of elitism that looks on these tools with disdain. A part of the move toward justice and diversity will be for academia to embrace these technologies that maximize the diversity of the long tail.

Some have questioned why universities prepare students to publish in expensive academic journals that have minimal circulation when they could have much more influence through blogging, self-publishing, and writing books (Tweney, 2014). This sector is likely to experience partial revolution. It appears in this case that the majority of journals are being disrupted by open business models and changes to regulation that require government funded research to be published openly.

At City Vision our approach has been more to support disruptive innovation that might revolutionize the industry. At City Vision, our self-publishing website UrbanMinistry.org in 2008 was the third most visited website among Christians serving the poor (UrbanMinistry.org, n.d.). During our recent accreditation site visit, one of the reviewers kept pressing me for why I did not publish in obscure academic journals on urban ministry. I told him that our website provides 100 times the readership of those journals, so I did not see the need.

The old factory model of granting tenure based on the volume of academic production in journals is becoming more outdated and contributes to the knowledge divide between the rich and the poor. At City Vision what we value is 1) practical experience, 2) online metrics like traffic, Klout score, number of followers, Technorati rank, etc. The elitism of academia toward new technologies that promote justice by discounting blogging and open publishing should be avoided by Christian colleges as it serves to perpetuate the knowledge divide and suppress minority voices and diversity that those very institutions need.

Having said that, I can still see situations where I might want to publish in traditional peer-reviewed scholarly journals and professional journals, and some of those journals will need fee-based subscription models to be financially sustainable. I especially see the validity of those channels in the more rigorous disciplines as science and engineering; however, these journals should consider giving free or greatly discounted access to those in developing countries.

The challenge for fields like urban ministry to follow the journal culture of academia in the age of blogs and self-publishing appears a bit like missionaries dressing natives in Western suits. The objectivist philosophy that dominates journals that makes sense for science and engineering appears to be misplaced culturally in other settings. Peer-review has much value, but not if it comes at the cost of adopting the objectivist framework of academia and providing unjust limited circulation. Paternalistic standards that devalue open publishing should not have a place in Christian justice organizations like City Vision.

The standard that most universities follow that students cannot cite Wikipedia has both validity and some unhelpful paternalism. Professors will routinely allow websites, online publications, subpar news sourced and other secondary sources to be referenced, but are adamantly opposed to referencing Wikipedia. A more accurate policy would be that students should strive to cite original sources whenever possible. In addition, Wikipedia should be a perfectly valid source to cite for any secondary source information as well as reference material such as definitions and survey of topics (which is how I have cited it in this paper). Most studies on Wikipedia have noted that the primary problem is with writing quality rather than accuracy (“Reliability of Wikipedia,” 2014).

I believe that the double standard toward Wikipedia of most higher education is representative of a self-serving elitist attitude of academia. Wikipedia, open content and open education is a major disruptive threat to higher education cartel on knowledge. Academia's attitude toward Wikipedia discredits open content and allows universities to continue their dominance of the knowledge production business. I do not believe that it would be reflective of Christian values for justice to support academia's stance toward Wikipedia. I believe that Christian leaders in higher education should play a part of bringing down the White, Western cartel of academia. I believe that a key part of that will be to provide informed support of open educational resources like Wikipedia.

Another example of unneeded cultural barriers in academia is the arcane and impractical nature of citation methodology. An article titled “Academic Citation Practices Need to be Modernized so that all References are Digital and Lead to Full Texts” published by the London School of Economics and Political Sciences questions why should we be requiring students to use an outdated citation methodology (Dunleavy & Diwakar, 2013). New shifts such as standards for referencing web pages and digital object identifier numbers help, but old citation standards still prioritize minutiae like punctuation of references rather than more practical concerns like usability. Increasingly, academic publishing culture and citation standards can appear to be a specialized “priestly” language that excludes the masses from access to knowledge. What is needed are standards that prioritize usability and access over tradition.

If higher education is able to make this cultural transition, then it is possible that the dominant model will shift from cultural assimilation to acculturation. The difference between the two is that cultural assimilation is one sided where the dominant culture uses power to insist that the person adopt their norms and be absorbed into the dominant culture and losing their original culture. In acculturation, two cultures meet on equal terms so that the person can become fully bi-cultural into a second culture while retaining their original culture. For Christians, much of their original culture will be retained, but because we live in a fallen world, each person has aspects of their values and worldview that will need to be assimilated into God’s worldview and values.

## Bringing Justice to Higher Education through BoP Strategies

My neighborhood in inner-city Boston is full of dollar stores and churches. My observation is that these represent two of the defining factors of most low-income communities: 1) they are very cost-conscious (Dollar Stores), 2) they are very relational (churches). People love to reminisce about the time when everyone had to go to the bank teller to get money, but they still keep going to the ATM machines. These represent some of the trade-offs between the low-cost world, high convenience of online education and the high-cost, high touch, high community of residential campus education. The reality is that even with disruptive innovation, both models will still exist.

There is a reason why low-income neighborhoods are full of dollar and discount stores. It is because that is where you shop when you are poor. The current trend in higher education is to follow the economy, which means increasingly competing to serve the rich that are seeing the only growth in incomes. Books like *The Fortune at the Bottom of the Pyramid* show that it is possible to have successful business models serving those at the lowest income levels serving the Bottom of the Pyramid (BoP) (Prahalad 2009). The reality is that these business models are radically different from those serving more affluent communities. Some of the key common factors of BoP business models are:

* The dominant principle is that you have to have a very low cost to effectively serve the BoP. This principle informs all the other principles because the BoP is severely income limited. While the most popular business adage in the developed world is “location, location, location,” the business adage in the BoP is “cost, cost, cost.”
* Businesses typically must provide very small units of products enabling people to “pay as you go.” This includes concepts of single use shampoo or even prepaid, “pay as you go” cellphone plans.
* Typically, businesses need to have a way to partner with very dispersed retail channels. One must be able to answer the question, how can a business get millions of street vendors and small shop owners to sell its product.
* Businesses must generally be high volume to be able to drive your unit costs down. Because cost is so critical, businesses will only make a small profit per customer. To remain sustainable, businesses must have a lot of customers to be able to drive down costs.

To make an analogy to retail stores, most Christian colleges and universities are comparable to Nordstrom’s or Saks Fifth Avenue in terms of their cost structure and their emphasis on quality. Their approach to poor students is to try to explain to them why Nordstrom’s is better rather than making the adjustments needed to serve a radically different market. This is paternalistic and ultimately hurts the poor.

The Institute of Logistical Management is offering an MBA for $3,000 (“ILM Launches New $3,000 Online MBA Degree Program,” 2014). Straighterline.com (whom we partner with) offers the freshman year for $999 each(“StraighterLine Launches ‘Freshman Year of College for $999,’” 2010). College for America is planning on offering an associate’s degree with tuition at $2,500/year all inclusive to 100,000 students (“College for America,” n.d.). These institutions understand that the poor shop at dollar stores. They understand that increasing numbers of Americans and students globally will not be able to shop at Nordstrom’s. Is the $3,000 MBA as good as a $100,000 MBA? Probably not, but it is likely to have a higher return on investment for poor and working-class students.

As someone who runs a college, I understand that we all have to balance the budget. Our tuition is still too high at $6,000 per year in developed countries ($3000/year in developing countries). I believe that if our current growth trends continue, within a few years, we will be able to offer our courses at $1,000/year to developing countries by growing our volume and decreasing our costs. As a technology-driven organization, each year we are automating 20% of our work, which allows us to grow at about that rate with the same staffing. Ultimately, even with that, we will need to grow our volume substantially to drive our per student costs down enough to be able to compete in the future. In the book *Abelard to Apple,* Richard DeMillo (2011), former Dean of Computing at Georgia Tech, says that to survive, existing institutions should plan on cutting their costs in half. He goes on to argue that for a lot of schools, even that may not be enough. All institutions in the middle-tier are pursuing a high-end market and almost none will make it because that market is already saturated. Right now, based on the strategy of many schools, it appears that they would rather shut down than follow a low-cost model similar to that of Huffington Post or social news sites. Higher education and Detroit automakers seem to have a lot in common.

## Will the Christian Response to Digital Be Like Hollywood or Radio?

The different Christian responses to Hollywood and radio provide two helpful case studies of the Church response to technological change (Erickson, 2001). The dominant response of the Church to Hollywood historically has been primary one of resistance. Hollywood was viewed as an evil and largely something to be resisted. There was a strong response to separate ourselves and avoid the Hollywood’s influence rather than a strategy of being salt and light to influence Hollywood. The result has largely been a self-fulfilling prophecy. By viewing Hollywood being “of the devil” and abandoning it, Christians were left with very little influence on what arguably became the most potent secularizing force of the 20th century.

The Christian response to radio was dramatically different. Christians were at the forefront of creating the first radio stations (Hangen, 2002). In the early days of religious radio in the United States, there was a legitimate concern that there was a rise of religious frauds who essentially created businesses to get rich from defrauding people under the guise of religion (comparable to the modern day spam fraud). Because of this the government partnered with the Federal Council of Churches to regulate religious radio. Religious radio that met the government’s standards for what was beneficial to the public received generous subsidies in the form of free airtime. The result was much of the early days of radio were dominated by mainline denominations. The problem is that the established radio networks and religious groups promoted regulation that limited the ability to compete, both for small radio stations and for evangelicals and other spiritual innovators. In many ways this was the equivalent of state sponsored religious radio analogous to state sponsored churches in other countries. Like in many countries, the state sponsored churches are more sterile than independent churches, which often have their legitimacy undermined by regulation.

While this hurt the evangelical broadcasters in the short term, their only alternative to government support was to develop entrepreneurial business models. The ultimate result of this was that the radio programs of mainline denominations were entirely dependent on government support. As opinions changed in the 1960s and the government sponsorship of religious radio ended, it was only the evangelicals that had developed the entrepreneurial business models to thrive after government support ended. The result is the situation today where evangelicals dominate religious radio in the United States, and globally radio has been a tremendous force for the advancing of the Gospel.

Similar to the history of government involvement in religious radio, much of the secularizing force of higher education in the world has been due to government regulation and subsidy (Carpenter et al., 2014). A recent study showed that each extra year of school results in 10% decrease in the likelihood of attending church (Mocan & Pogorelova, 2014). The long-term trend of higher education globally is one toward increasing privatization to the point where now 30% of global higher education enrollment is in the private sector (Altbach, Reisberg, & Rumbley, 2010). One potential conclusion of these trends is that there is significant opportunity for Christian higher education to benefit from the trend of privatization to reduce or reverse the trend toward secularization.

Whether the response of Christians to the digital revolution will be closer to their response to Hollywood or to radio remains to be seen. Part of the reason for the dominance of Christians in radio is that it would be what Marshall McLuhan said was a “hot” media, focused on ideas and belief. Hollywood is a “cool” media dominated by narrative (Donovan, 2005). Modern Christianity with its focus on belief lends itself to the nature of the medium of radio more than that of video. Digital media blends both the hot and cool media elements, so one might expect that from the nature of the medium, its effectiveness of Christians at promoting the Gospel through digital might fall between that of radio and Hollywood/television/movies.

## Two Scenarios of Christian Higher Education in 2050

It remains to be seen whether Christian Higher Education responds to the disruptions being brought on by the digital revolution more like the response of Christians to radio or to Hollywood. The following are two scenarios of the landscape of Christian Higher Education in 2050. The following section provides a negative scenario and a positive scenario of the impact of disruptive innovation on Christian higher education.

**Negative Future Scenario**

In the years approaching 2050, the governments of the Western world see their budgets severely limited by a combination of entitlement funding and an aging population. As a result, higher education is increasingly privatized as governments abdicate the future of higher education to corporate courseware platforms. Global higher education becomes an oligopoly where the three remaining few courseware platforms capture more than 90% share of the education market.

The dystopian future of long-term permanent technological unemployment proves true, and automation eliminates over 50% of the world’s jobs. Economist determine that the optimal way to run the economy is to have the 10% of society that is the smartest and most equipped to run 90% of the economy. The world degenerates into a long-term feudal society divided into the top 10% and their servants. The top 10% who get these jobs are determined by who gets in to the remaining accredited private colleges that serve the top 10%. These colleges use the courseware platforms, but they essentially hold a limited number of “passports” into the top 10%. Because of this, the average tuition of these schools is $200,000/year (in 2014 dollars).

With the advent of disruptive innovation in higher education, most Christian higher education institutions define their core values in opposition to the techno-centric values being promoted by organizations like Google. The prevailing attitude of Christians toward this new form of higher education is similar to how Christians have historically responded to Hollywood, viewing it not as an opportunity but as a tool of Satan. The perspective and culture of the courseware platforms is secular and militantly anti-Christian.

The result is that Christians face a choice to either get their higher education through one of these platforms and lose much of their unique culture and values or avoid higher education altogether and join the pool of the poor without a higher education that are going after the dwindling pool of jobs. An increasing proportion of Christians choose to forgo higher education, and as a result, they are left behind in the global economy. The effect of market pressures and the increasing secularization of society is that there are fewer than 50 small Christian liberal arts institutions left in the developed world with their tuition averaging $100,000 per year (in 2014 dollars). Christian higher education largely becomes something that is only affordable by the richest 1% of Christians. The end result is that the courseware oligopolies finish the process of secularization of higher education that was started by governments.

Christianity is on the decline and the majority of the world’s Christians become increasingly poor. Their dominant perspective is that they are a tiny “remnant” of those resisting the global domination of Satan, praying for the return of Jesus. Their influence on society continually diminishes as they withdraw further from society.

**Potential Positive Future**

In the years approaching 2050, the governments of the Western world see their budgets severely limited by a combination of entitlement funding and an aging population. As a result, higher education is increasingly privatized as governments abdicate the future of higher education to corporate courseware platforms. Without government subsidies, most public higher education institutions cannot compete in a competitive market. As a result many campuses are closed down and sold on a mass scale comparable to the closing and selling of military bases after the end of the cold war.

Christians embrace the courseware platforms, which provide a diversity of perspectives of materials that largely mirrors the demographics of the world. As the global South and East eclipse the Western world economically, the monopoly of Western academia to filter content ends and the trend toward secularization in education is reversed. The dominant view of old Western academic culture becomes comparable to that of colonialism imposing the secular values of Western countries. With over one-third of the global population being Christian, over one-third of the content on the courseware platform is developed by Christians and is friendly toward a Christian worldview. Christians develop hundreds of millions of courseware units and become the largest global market segment for education. This content development is also dominated by Christians in the Global South and East where the majority of the growth of Christianity happens.

Christians recognize that their core competency is in changing lives. There is a global resurgence of churches and groups that focus on discipleship like YWAM, which change lives and use courseware systems to equip them for jobs. Employers value degrees from Christian institutions because they are a good indicator of strong character. Traditional secular higher education becomes marginalized to only serve the richest 5% of Western countries. These institutions become brands that are synonymous with the elite but grow increasingly irrelevant. Secular groups that attempt to replicate the success of how churches use courseware systems are not successful because they are not effective at changing lives.

While Western countries continue to dominate elite education, the global South dominates the world in terms of number of degrees provided. The majority of Western Christians spend one to two years being educated in the global South using the flipped classroom, combining academic learning from courseware with character formation by the top Christian leaders in the world. Over half the world globally receives a Bachelor’s degree and more than two-thirds of people in the most developed countries. Over one-third of the world globally has received a Master’s degree and more than half of people in the most developed countries. The majority of the world received degrees that are free or almost free. These degrees are not very valuable without the accompanying life-change, so many seek churches and Christian institutions for that life change.

The end result is that technology greatly expands the capacity for individuals to promote evil, but it has also greatly expanded the ability of Christians to bring good. Much of the world grows increasingly hedonistic, degenerate, fearful, and lawless. This is countered by a growing global Christian community that is scattered with influence in all sectors of society.

## Strategy for Tier 3 Good Enough Quality Low Cost Degrees (City Vision’s Strategy)

The leadership principles outlined in the previous chapters outline the values and context that forms the basis of City Vision’s strategy. The goal of our strategy is to help move the world from the negative scenario above of mass unemployment and decline of Christianity toward the positive scenario of bringing more of Jesus and Justice in the world. As a small accredited institution, City Vision is attempting to move from the Tier 4 Small Business to the Tier 3 Good Enough Quality Low-Cost Degrees. The reason City Vision will focus on this tier is that it fits with our core competencies of technology and low-cost content and education.

The strategy for Tier 3 Good Enough Quality Low Cost Degrees is worth focusing on because it plays a pivotal role for all levels. Looking at the journalism example, even big brands like *New York Times* have to become more like the Huffington Post and smaller online journalism outlets aspire to achieve the scale of the Huffington Post. Similarly, Tier 2 High Quality Moderate-Cost schools will need to become more like Tier 3 to survive, and many small businesses at Tier 4 will aspire to become Tier 3.

It is helpful to learn from market analogy for this tier such as the Huffington Post, Business Insider and Mashable. While some might critique these news agencies as “dumbing down” the news or exploiting freelancers, this new model seems to be the most effective form of journalism based on current market structure. The field of media ecology explains that each medium has its own form and media companies need to fit that form (McLuhan, 1996). For example, most Christian content is sermon based, but the form of video, television, and movies lends itself most to narrative and telling stories. The Jesus Film has been successful claiming over two hundred million decisions to follow Jesus because it used the narrative nature of the medium of video to tell the story of Jesus in over 1,200 indigenous languages (“The JESUS Film Project | Statistics,” n.d.). Christians were able to dominate radio partly because its form does lend itself toward sermons. To have a successful strategy in response to disruptive innovation in higher education, it is essential to understand the nature of the form of the new medium of education.

Disruptive innovation will create a new ecological landscape in education that will lend itself toward Tier 3 strategy. The question to consider is should Christians even attempt to compete at Tier 3, or should they avoid it as an “evil” as many viewed Hollywood and the medium of video. The conclusion from the above chapters is that Christians should compete at Tier 3, or else they will be conceding the dominant form of education in the future to secular forces as largely happened with Hollywood. Then the question becomes, if Christians compete at Tier 3, how can organizations do so with excellence and integrity that reflects our Christian values and fits the medium.

As described in chapter 3, one of the defining factors of online education is that low marginal cost of adding students will benefit large organizations. Based on this fundamental law of economics, it will be critical to achieve that maximum scale in order to remain a viable business. The largest scale organizations will be the courseware platform providers. Their scale is likely to make it possible for them to provide much of their materials for free, making money from advertising, recruiter fees, and other diploma or credentialing fee services.

Because of this the primary core competencies of this tier will be technology driven such as technology-driven online marketing (called growth hacking) and low-cost, efficient service provision. To succeed as a Tier 3 school City Vision will need to develop a core competency in growth hacking. This will involve mastering concepts like search engine optimization, funnel/conversion optimization, A/B testing, online marketing, content marketing, viral marketing, and marketing automation. Using these tools, in the past two years we have more than doubled the efficiency of our conversion rate of people visiting our website to people enrolling.

Similarly, in the future, we will need to find ways to cut costs. One way that City Vision plans to reduce costs is through outsourcing most of our general education courses to courseware vendors. We currently outsource to Straighterline.com, but we are carefully examining the courseware systems of McGraw Hill and Pearson and courses of ACE and Saylor Academy to use in the future. In the long term, we expect that more non-traditional players will grow to dominate this space and expect to work with them.

While we outsource courseware to vendors, we also curate all content to ensure that it is consistent with a Christian worldview. The courses that appear most problematic for a Christian institution are elements of sociology and psychology that strongly promote a value-free relativistic worldview. With a course like Biology, we will probably customize the courseware to provide material that provides a range of perspectives dealing with topics like evolution to accommodate Christians from denominations that both believe that evolution can coexist with creationism as well as those who do not. The courseware systems have enough flexibility that if we have partners that insist on their faith being either compatible or incompatible with evolution (or other similar issues) then, we can customize courses to accommodate them.

One of the unique ways we reduce our cost is through a very lean process for course and software development. We use the Lean Startup methodology of using rapid iterations, minimum viable products, and strategic pivots (Ries, 2011). Our approach to software development is closest to the more efficient processes like Kanban and Agile methods of development, but we typically are even leaner than those methods. Our Master’s program was originally developed using backwards design starting with program objectives (Wiggins & McTighe, 2005). One of the problems of using this method was that it assumes that the correct program and course objectives can be known in advance. Because our Master’s in Technology and Ministry is both in a new field and a field that is rapidly changing, a better instructional design model would be one that incorporates the rapid iterative design principles from the Lean Startup and lean software development models rather than traditional instructional design models like ADDIE.

One significant factor in cost is accreditation requirements. One of the advantages we have over regionally accredited universities is that we are nationally accredited through DETC, which provides more flexibility for innovation. There have been calls for new models to emerge for accreditation to accommodate some of this innovation and, in particular, to provide course-level accreditation (Fain, Paul, 2013). Some early models of this are ACE’s College Recommendation Service and the DETC’s Approved Quality Curriculum program. Even better would be competency-level accreditation, but that seems to be very far off right now, and it is likely that market solutions from testing companies like ETS and ACT will fill that need in the short-term. Course-level or competency-level accreditation would increase the modularity in higher education enabling institutions using “off the shelf” components like courses or competencies. The current form of accreditation is by degree or school only, limiting the ability to create a competitive market of components to build degrees.

Clayton Christensen’s disruptive innovation theory states that regulation will go through three stages: 1) Fostering new industry, 2) Stabilize and Assure quality, 3) Afford competition (C. M. Christensen & Raynor, 2003). The second stage can turn protectionist where it primarily serves to protect existing industries from disruptive innovation. In the third stage, the focus is on outcomes rather than inputs and resources. Competency-based education is a shift to those outcomes, but it remains to be seen whether accreditation and regulation will keep up. If accreditors do not provide accreditation that is both more modular and competency-based, then a likely solution might be that the courseware platforms self-regulate and provide an alternative to accreditation just as Uber is doing with Taxis.

We currently focus most of our courses on the junior and senior years of college and Master’s degrees. As more undergraduate degrees and courses become commoditized, we plan to respond by 1) outsourcing to courseware vendors in the commoditized areas and 2) moving to higher value products that are more difficult to commoditize by increasingly focusing on graduate education.

The primary ways we integrate relationships that bring life change is through 1) online education with Christian instructors 2) strong emphasis on internships with Christian partners. As mentioned earlier, we have essentially outsourced the primary relational component of our program to internship sites. We select only internship sites in Christian organizations that could provide a strong Christian community to bring life change as well as job skills to our students.

A key point to consider for Tier 3 institutions is how to be low-cost while avoiding paying exploitive wages to adjunct professors. Until now, we have primarily done this by working with instructors that are full-time practitioners that serve as part-time adjuncts. It is likely that there will be a long-term trend toward an increasing emphasis on bi-vocational faculty, just as bi-vocational pastors are common especially among congregations serving small or lower-income communities. How to pay a living wage is a complicated issue, and there are a number of historical analogies to draw from: the decline of farm workers with industrialization, the decline of live performers with the rise of mass media, and the decline of jobs in journalism.

There are many lessons to be learned from the transition farming went through during industrialization. One example is how high-labor sectors of farming coped with rising labor cost. The primary solution in high-labor farming sectors like fruit has been either migrant labor or relocating to farms in regions with lower-labor costs. In fair trade farming, a company might pay a worker in a developing country $5/hour, which might be well above the market wage in that country but well below the minimum wage in the United States. Similarly, the economic theory of comparative advantages would suggest that there is likely to be a net migration of labor-intensive relational work from high costs of living areas to low cost of living areas both within the United States and throughout the world. Christian educational institutions in some of the lowest cost of living areas such as rural United States and in developing countries are likely to be hurt the least and benefit the most by the coming disruption in higher education.

A key part of City Vision’s strategy will be to partner with faculty in these low cost of living areas to provide the equivalent of “fair trade” wages. At City Vision all of our adjunct faculty are bi-vocational ministry practitioners that teach courses both as an extra revenue stream and as ministry opportunity to teach and mentor others. We have also found that it is more common for our adjunct faculty to live in areas with a low cost of living. Both of these factors contribute to make modest stipends to adjunct faculty more sustainable. Regardless, any future strategy of Tier 3 schools is likely to involve partnering with low-income communities and developing countries because they have both time and space that will be valuable assets to provide a relational, transformative Christian education.

Another lesson from farming is that many of the smaller-scale farms were unable to pay fair wages to their workers, and they were losing money because they were effectively too small for the new market structure. With the increasing requirement to scale, many Christian institutions will find themselves in the situation of both losing money and not being able to pay fair wages. The solution is to scale, which in the private sector would mean merger or acquisition, but that solution is likely to be much more politically untenable for most schools. For Tier 3 schools at large scale, if they are focused on serving the poor, they may not be able to pay a living wage to adjunct faculty with large student loans living in high cost of living areas. A better solution for a disruptor will be to develop its own low cost graduate programs to provide education to a new tier of students that could not afford traditional graduate education. This will provide a pool of faculty without the burden of student loan debt, who will then have lower costs of living.

Another strategy for avoiding exploiting adjunct faculty is to recognize that the changing market structure is permanently changing the role of faculty. The new market structure for faculty will be similar to the effect that recorded media had on live performers. There will be fewer full-time faculty (just as recorded media reduced the demand of live performers), and those who are full-time faculty will become more of superstars. The rise of adjunct faculty is a part of the overall trend toward a freelance economy. The freelance economy has grown dramatically from 7% of the workforce in 1995 to 15% today, and it is expected to grow to 20% of the economy in 2020 (Wald & Leventhal, n.d.).

The summary of how the changes to market structure will change the role of faculty is that it is decreasing their market potential locally, but it is greatly expanding it globally. For most faculty the days are over of getting a tenure-track job at one local university and staying there for the rest of their lives. The reality is that most adjunct faculty are among the world’s top experts on a few given topics. The problem is, right now, most adjunct faculty are equipped to serve only a local market for teaching that is dying or in the adjunct market that has oversupply of faculty. One analogy might be of the best chocolate truffle maker in the world going out of business because they cannot sell much of their product locally and the large retail outlets will not pay them what their truffles are worth. Their strategy should be to go directly to market on the Internet, but the problem is that they are not good at online marketing; they are good at making truffles. The solution would be for them to either gain the expertise in online marketing or partner with someone who has it, so they can effectively get the value their product is worth. Similarly while many adjunct faculty are the top experts in the world in an area, they do not have the online marketing expertise to get the value that their knowledge should bring.

Because of this shift to a freelance economy, the role of schools in supporting regular and adjunct faculty will change to address this problem. There are significant elements of the freelance economy that may drive it to be exploitive, so the role of a Christian university is to help adjunct faculty to maximize their market position. Effective institutions should function as incubators and startup accelerators of their adjunct faculty’s businesses. At City Vision, we train our graduate students using the book, *The Startup of You* (Hoffman & Casnocha, 2012)*.* The basic idea behind the book is that with the rapidly changing market structure of the current economy, it can be helpful to manage for people their careers as they would a startup. Another book we use is called *Platform*, which is how people can use the Internet to establish a “platform” online to market their own expertise or consulting (Hyatt, 2012).

The core businesses for each adjunct faculty are similar to the core businesses of the university: research and consulting, knowledge production and transfer, building Christian community, and discipling. Faculty need to start thinking about these functions across multiple markets and media formats. For example, an expert on addiction studies can leverage that through adjunct teaching, local counseling, online counseling, blogging, books, giving workshops, webinars, YouTube videos, and leading retreats all on the topic of addiction studies. They can use the same material across all of these media outlets. Because most faculty may not be able to manage logistics and training in all these areas, the university can help by providing key functions that are more efficient to centralize.

Another core competency we are developing is in back-office systems process optimizations to reduce costs. For many schools this involves an end-to-end Enterprise Resource Planning (ERP) system from a vendor. So far, our strategy has been to reduce costs by developing our own ERP system from off-the-shelf components in Salesforce to optimize our internal processes. It remains to be seen whether this will be scalable or not.

There are several components of a competitive response of a Tier 3 Christian institution. Tier 3 Christian schools should follow a “fast follower” or second-mover strategy to secular schools like College for America that are attempting to establish a first-mover advantage (“First-mover advantage,” 2014). This will provide the advantages of lower costs from the ability to use more standardized technology and content rather than needing to build everything as first movers must do. This cost savings can then be invested in the added costs needed to develop Christian elements of the programs, so that Christian programs can still be of comparable price to secular programs.

Very few, if any, institutions of Christian higher education can hope to achieve comparable scale of 100,000 students in a Christian general studies degree. Based on that, Christian institutions following a fast-follower strategy will need to partner with courseware providers that have scale beyond College for America. For example, in the future, some courseware providers may have 10’s or 100’s of millions of students in general studies courses, dramatically driving down their costs. Christian institutions can then curate the content from these courseware systems into their own courses. It is because of this that we view it as inevitable to partner with courseware providers, add unique courses of our own, and work toward scaling the organization.

The conclusion of this chapter is that Christian technology leadership will be the most essential core competency needed to succeed as a Tier 3 institution of higher education. Chapter 6 of this paper will focus on how to become an effective Christian technology leader. Chapter 6 will cover the principles in technology leadership we have learned in our experience at TechMission. These principles and values ultimately became the basis of our Technology and Ministry Master’s program. Chapter 7 then explains the process and details of our Master’s program to develop Christian technology leaders.

## Lift, Secular Stagnation and “Disrupting Yourself”

There is a saying among innovators, “If you don’t eat your lunch someone else will.” Disruptive innovation theory states that if organizations do not disrupt their own core business then someone else will. Western higher education is about to be disrupted by a combination of technology and demographic forces. Many institutions will not be able to make the difficult decisions needed to adapt to this transition. In *Abelard to Apple*, Richard DeMillo (2011) recommends that most schools need to plan to cut their cost structures in half.

The Christian life is one of servant leadership modeled by Jesus. Many faculty and staff in Christian institutions have modeled servant leadership by helping their institutions remain financially viable by taking voluntary pay cuts, early retirement, selling underutilized property, shifts to part time status, and volunteering for layoffs. This is in stark contrast to secular examples like American automakers that were driven into bankruptcy by union members that maximized their individual earnings at the expense of the group, only later to be forced to take pay cuts. In some cases, no amount of pay cuts can make an institution financially viable, and in other cases, pay cuts and other radical changes are the only ways they will continue to be viable.

It is not by chance that the areas where Christianity is thriving the most typically are the areas with the lowest cost of living. Christianity is inherently a relational faith, and parts of society that have the highest cost of living will have the highest demands on their time and will find relationships more costly. This coincides with the concept of “lift” popularized by Donald McGavran (McGavran & Wagner, 1990). The idea is that as a people group becomes Christian they experience a boost to their economic status called “lift,” which is the result of making wiser decisions and God’s blessing. As they become more affluent, they can more easily depend on themselves rather than God. Eventually, this increases the tendency toward leaving God and secularization sets in. This pattern of needing God/being blessed then leaving God/becoming oppressed is a summary of the history of Israel in the Old Testament. This is typified in the Exodus when God blessed Israel by freeing them from Egypt and even giving them treasure to take with them, but they then used that treasure to make an idol in the golden calf.

Liberal secular economists understand this pattern, and have termed it secular stagnation (“Economic stagnation,” 2014). The primary driver of secular stagnation is a decrease in working-age population that happens in affluent secular societies due to decreasing birth rates. It follows a similar pattern to the Christian concept described above. The concept of “lift” and secular stagnation help to explain what is happening to Christian higher education. The West has essentially become so affluent with such a high cost of living that our time is so valuable and our lives so efficient that it has become difficult to continue Christian higher education in its current form in the developed world. Christianity in much of the developing world is now experiencing economic “lift,” while Christianity in much of the West is at risk of decline. It could be argued that Christian higher education reflects this larger trend.

While affluence can make a society more at risk of becoming secularized, it is not an inevitability. When Israel left God, the most common problems identified by prophets were that Israel worshipped other idols and oppressed the poor. In doing so, Israel broke the two great commandments of loving God and loving others. The way to avoid the decline is to make tough decisions in the face of disruptive innovation that require dependence on God (loving God).

At TechMission, we made the tough decision to drop all our programs except for our online college. This decision involved transitioning from an organization with 20+ full-time faculty staff and 80+ full-time interns to an organization with less than 10 full-time staff and 30+ adjunct faculty. It also means partnering with people from lower-income communities in non-exploitive ways that develop their capacity (love others). Bakke Graduate University (BGU) has provided an excellent model through its Overture courses that do blended learning, combining a week-long intensive course in a developing country with online lessons. BGU has modeled an effective staffing and faculty partnership with Jamaica and other countries. BGU has also been a pioneer in raising up indigenous leaders in developing countries to such an extent that at the most recent Lausanne gathering of global Christian leaders in Cape Town, South Africa, BGU faculty, staff, and alumni had the largest representation of any single university in the world, despite BGU’s being dramatically smaller than other institutions (B. Smith, 2014).

It will be critical that these partnerships are done in ways that build the capacity of these communities rather than draining them of capacity, either through exploitive compensation or through the “brain drain” of recruiting top Christian leaders from the South to move to Western countries. Online education provides an excellent vehicle for this as indigenous leaders can stay in their own countries and benefit from low-cost of living and favorable exchange rates when teaching courses for Western schools. To avoid being exploitive, partnerships with developing countries should focus on raising up and employing faculty to avoid problems with “brain drain.”

Throughout this process, we have followed the belief that we are to love and care for all stakeholders equally including faculty, staff, and students. It does no good for faculty or staff to make their lives unsustainable for the sake of students. Neither is it just for faculty and staff to avoid painful market realities by offloading all the pain onto students in the form of student loans. We all need to be stretching ourselves in sacrificial ways that require dependence on God while remaining sustainable.

The goal of Western Christian higher education should be to disrupt itself by partnering with Christians in the developing world to dismantle academic imperialism from the West and the elite. The following are the key steps in this strategy. The first wave of elite faculty are educated in high-cost accredited universities. They in turn train a wave semi-elite faculty in medium-cost accredited universities. They in turn train a wave of non-elite faculty in low-cost accredited institutions. It should be noted that in the first stages many of the leaders of these universities may still be White, upper-middle class indigenous leaders or Western leaders that are bridge-builders into low-income communities. Then eventually, the dominant form of relational higher education is likely to become low-cost education in developing countries led by indigenous leaders from low-income communities. It is likely that for at least some time, this education will still be dominated by the courseware platforms from developed countries. It is likely as global indigenous courseware platforms emerge, they will be from formerly developing countries that are now developed, with China and India probably serving as the first examples.

The job of all good leaders is to replace themselves. The goal of leadership in every Tier 3 Christian institution should be to use disruptive technologies to ultimately raise up the leaders that will eventually disrupt their institution. While Western missionaries may have helped spark initial growth of Christianity in much of the developing world, now for much of that world indigenous leaders are taking it to new levels that would have been impossible under Western leadership. Once these indigenous institutions become dominant, they will continue to partner with Western individuals and institutions recognizing that we all bring value to the Kingdom.

In many cases the Western individuals and institutions will be the “junior” partners, and we will have effectively ended the academic imperialism of the West. This is not to say that “the West is bad,” and national leaders are good, but to recognize to recognize that non-Western Christianity has grown up. Everyone has something to bring and everyone should have a seat at the table, but more frequently, we will be sitting at a table that is set by non-Western Christians. I see this clearly because I live in Boston, which one of the first Western cities to experience re-evangelization from diaspora Christians from the global South. An article in *Christianity Today* called this Boston’s “quiet revival” because Boston is experiencing the longest period of church growth its history with 90% of church plants being among racial minorities (Moll, 2006). Similarly, Christian higher education should look to leadership in global South to help infuse vitality into their institutions.

This is also not to encourage the “identity politics” game that often plagues Christians as well as the rest of the world. In the game of identity politics, the elite in developing countries use nationalism to say that Western academics should have no role. Non-elite, Western academics criticize the elite academics in developing countries for their classism. Others might argue that in education, social class is generally the dominant factor as class typically has the strongest correlation to education levels. Identity politics becomes a mirror of secular values with each group vying for the “most oppressed” or “most indigenous” using their credentials of race, class, gender, ethnicity and nationality to argue their superior status. A better approach is one that recognizes pragmatically the value of indigenous leadership, but where we all act as servant leaders in “mutual submission” to each other.

# Chapter 6: Technology Leadership Principles at TechMission and City Vision

## TechMission and City Vision as a Learning Organization

Maxwell said, “Everything Rises and Falls on Leadership” (Maxwell & Covey, 2007). In a technology-driven world, everything rises and falls on technology leadership and having a technology-driven culture. Larry Page understood the importance of having a technology-driven culture when he fired all his project managers and replaced them with bi-lingual managers who were fluent in both technology and management. This chapter will focus on key leadership principles that for Christians leading in technology.

Leadership in a technology-driven industry means being able to reinvent yourself every three to five years, because any organization that does not reinvent itself becomes obsolete. In 2010, 60% of Apple’s revenue came from products that did not exist three years before (Dedin, 2010). Apple successfully grew from each technology by deploying what is called “innovation extensions,” which are where a company continues to grow exponentially by launching its next product at the peak of the adoption cycle of its previous product. At the peak of the iPod sales, Apple launched the iPhone, and then extended that to the iPad. Now that Steve Jobs is gone, many have questioned whether Apple can continue this.

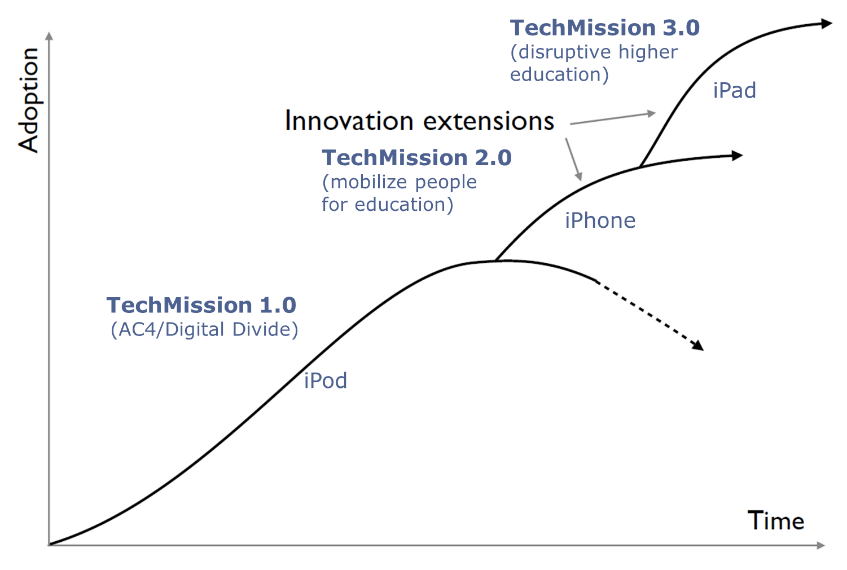
On a much smaller scale as an innovative technology driven nonprofit ministry, we have gone through similar innovation extensions. We call these three waves of innovation extensions in our history TechMission 1.0, 2.0 and 3.0 as shown in figure 22. We started with TechMission 1.0 in nontraditional education in providing vocational courses addressing the digital divide. TechMission’s first program was the Association of Christian Community Computer Centers (AC4). Part of what we learned from AC4 was that computer centers were the innovators and early adopters in using disruptive technology to educate tens of thousands of individuals in low-income communities. We realized that the digital divide was only one part of a much larger educational divide that is driving most inequality. The more significant piece of addressing the educational divide was in mobilizing people.

Figure 22. Innovation Extensions in TechMission's History Compared to Apple’s History

Right at the peak of the hype around the digital divide, we “pivoted” to TechMission 2.0 and successfully redirected all of our strategy to mobilizing people for education using websites like ChristianVolunteering.org and AmeriCorps interns. Because investment in nonprofits addressing the digital divide had peaked, we saw most of our peer organizations close, while we grew tenfold in our social impact to the community. Over the next 10 years, we provided over 500 full-time interns and over 75,000 volunteers, primarily education to almost 25,000 at-risk youth through after-school and teen educational programs. In this pivot, we effectively stopped investing in AC4 to focus on the innovation extension of TechMission 2.0.

We realized that with the long-term trend of governments toward fiscal austerity due to entitlements and increasing hostility toward faith-based groups that government funding of nonprofits was about to peak, so we again pivoted to TechMission 3.0 to focus on disruptive innovation in higher education. We realized that the market for technology educating the poor is entering the early majority and late majority stage. As predicted by Geoffrey Moore (1991), most of the nonprofits involved in addressing the digital divide did not succeed in “Crossing the Chasm,” which is the term he used to make the transition between the early adopters and mainstream. Our theory is that the disruptive innovation of online education had improved in quality enough that we could use it as a part of an accredited college. In this pivot, we effectively stopped investing in our TechMission 2.0 programs to focus on the innovation extension of TechMission 3.0. We walked away from a grant from AmeriCorps that made up more than half our budget in order to be able to focus on innovation.

In 2008, TechMission acquired City Vision College. The college was originally called Rescue College and was started as the education arm of the Association of Gospel Rescue Missions. City Vision started very small with only one Bachelor’s degree program focused on training Urban Missions (accredited by the Distance Education Training Council). It has since grown by an average of 20-30% per year, and now has added Bachelor’s in Addiction Studies and Nonprofit Management, as well as a Master’s in Technology and Ministry.

Organizations that want to lead in a technology dominated field have to be a learning organizations (Senge, 2006) that focuses on developing leaders in technology. It is because we believe that “success rises and falls on leadership, that we developed the Master’s in Technology and Ministry to be a learning organization that prepares future Christian leaders in technology. All these reasons explain why the next step for City Vision is to develop a Master’s program in Technology and Ministry.

Getting my doctorate and completing this dissertation is a part of my own race and TechMission’s race against the machine. Our goal is to help our staff, students, and interns to advance in this race. I encourage all of our staff and interns without a degree to get one, and those with degrees to get the next most advanced degree. This is allowing City Vision to add graduate programs as undergraduate programs become increasingly commoditized. As the organization advances its learning, it is staying ahead of the commoditization that is happening to the lower levels of higher education.

Having worked in the technology field for 20 years, I have both seen and had to make management decisions related to automation. In the early days of TechMission, we had many interns doing very routine tasks. Now, most of those interns have been replaced by a few very intelligent staff. This represents the same pattern of automation identified in these books discussed previously that the work of 5 to 10 workers of average education and intelligence are being replaced by the work of 1 to 2 workers with extraordinary intelligence and high levels of education. Realizing the justice implications of this, I initially tried to fight this trend at TechMission by continuing to have larger numbers of interns doing routine tasks. The problem was that the technology was advancing exponentially and the cost of interns continued to go up, so that the tech-intensive, few workers solutions in some cases would boost productivity two to four times over the labor-intensive option. Resisting this trend seemed to be like “pushing back the tide.”

We decided that strategically rather than trying to fight this trend with continuing to follow labor-intensive strategies, we would have to adapt to become more of a learning organization (Senge, 2006). That has enabled our staff to advance their own education as a way to avoid being obsoleted by automation. We made a strategic move by moving from an organization focused on social services to a university focused on educating those in social services. The reality is that all of our staff at TechMission and in all parts of the economy are in a “race against the machine.” The only solution is to become a learning organization and to pursue a strategy of lifelong learning. I have believed that spiritually, everyone is either growing or dying as there is no standing still. It appears that the same truth applies to the economy and education; everyone is either learning or becoming obsolete. There is no standing still in our learning intensive societies.

Another reason why we developed the Master’s in Technology and Ministry is that we believe that just as the world experienced a great migration from rural to urban, we are experiencing a migration into a virtual and technological world. Just as we needed to develop new methods of ministry for urban communities, we need to develop new methods of ministry for a tech-dominated world. The goal of our Master’s in Technology and Ministry is to equip leaders in a tech-dominated world. The following are some of the leadership principles that we learned in our experience at TechMission that helped form the basis of our Master’s program.

## Leadership Principles from Urbanization: Incarnational Ministry and Indigenous Leadership Development

As we transition to the information age there is a massive, cultural shift that is happening rapidly. It can be helpful to learn the lessons of what Christians did right and wrong in responding to the Industrial Revolution. One of the biggest trends of the industrial age was the trend of urbanization. With urbanization, Christians in cities typically have not handled the changing demographics of urban neighborhoods very well. In the United States, urbanization created a tendency of White flight, which Christians were a part of as much as anyone. This and other historical factors led to the common critique of Christians in the quote from Martin Luther King, Jr. that “the most segregated hour of Christian America is eleven o'clock on Sunday morning” (King & Armstrong, 2007).

Much has been written about the changes in how new generations relate to technology. This phenomenon was covered in *Growing Up Digital* (Tapscott, 1999) and Martin Prensky’s article on “Digital Natives” (Prensky, 2001). The idea is that those born with digital technologies are “digital natives” as opposed to those who saw the technologies developed in their lifetime, who are “digital immigrants” who have to adapt to the changing culture brought by the technologies. Because I have spent the majority of my life living cross-culturally and have a lot of training in cross-cultural ministry and missions, I prefer to use the language of “Digital Natives” because it lends itself to applying the principles that Christians have developed for what healthy cross-cultural ministry looks like. This section will first look at the leadership principles from urbanization and will then apply those principles to the virtualization of society and digital natives.

Missions and urban ministry provide a very helpful framework for leadership of digital natives in the information age. As Christians, we are called to be “in the world but not of it” (paraphrasing John 17:14-19) In the past several decades there has been a growing movement of Christians whose response to urbanization is incarnational ministry, which has been popularized by John Perkins and the Christian Community Development movement. The idea behind incarnational ministry is that we follow Jesus’ example and live among the poor in urban communities. It recognizes that we are called to suffer in the pain of others, as Jesus did, rather than withdraw from it.

Another key principle of missions and urban ministry is that of indigenous leadership development. The history of missions can largely be described as struggling to take hold when it is brought by outsiders; however, it thrives and grows rapidly once the Gospel is contextualized in a local cultural framework by indigenous leaders. Because of this, indigenous leadership development is a key principle of all missions and cross-cultural ministry.

The story of my parents’ lives and my own life shows the challenges of urbanization and principles how to effectively lead in an urban environment. I grew up in a low-income part of Kansas City. Both my parents were raised in rural environments. They came to the city with rural sensibilities such as when you are on the farm, you can just let your kids go unsupervised outside. In the city, if you leave your children unsupervised outside, they are likely to get into trouble and get hurt. I saw most of my friends start using drugs and having sex in elementary school, largely because they also had rural parents that left them unsupervised. The problem was that we had parents that didn’t have the parenting skills they needed to live in the city. This same pattern is seen across the world, both in the rural to urban immigration and in the immigration between countries (which often also includes a rural to urban element).

Now, I’m raising my children in an urban environment. I know the risks and know how to moderate those risks because I’m fluent in urban culture. I take my children to play in a park where people are smoking “weed,” but I am sure that I am with them to keep them safe. We do not let our children live most of their lives on the street unsupervised as my parents did. We enrolled our kids in day care with low-income kids, but we monitored the situation and moved them when one day care environment became too chaotic. What I have learned is that when raising my kids in an urban environment, avoidance is not the solution. That results in an ethnocentric view that all urban culture is bad. I also am cautious to not be too permissive and expose them to more than they can handle.

Similarly, at TechMission we have placed over 500 urban ministry interns to serve in low-income areas. As indigenous urban leaders, we are all street savvy. We tell the interns “walk down these streets, and don’t walk down those streets at night.” In a generation, we have moved from my parents being urban immigrants with no urban fluency to me as a native urban leader. At TechMission we followed these two principles of incarnational ministry and indigenous leadership development, which allowed us to run a national urban ministry AmeriCorps program that to our knowledge had the highest representation of indigenous urban leaders out of over 100 national AmeriCorps programs.

Christian institutions of higher education have had to follow a similar adaptation process to urbanization. They recognized that they had to develop new models to teach people to address new opportunities and problems. Now they are called Schools of Urban Ministry and urban campuses, and they deal with urban problems. The problem with that approach is that urban ministry programs can too often become marginalized ghettos within the academic community. Now Christian colleges in the United States are recognizing that with the changing demographics in America, children of color will soon make up the majority of enrollments. They are recognizing that the core of their culture will need to change. These principles of incarnational ministry and indigenous leadership development will be key to that process.

## Digital Natives: The Demographics of the Neighborhood are Changing Again

The same leadership principles from urbanization also apply to the virtualization of society. While urbanization created a demographic, cultural change, this time the cultural shift is happening much more along the generational lines of digital natives and digital immigrants. This section will discuss principles for leading digital natives to follow the successful examples of how Christians responded to urbanization and avoid the failures of some responses of Christians to urbanization.

The story of my parents’ lives and my own life shows the challenges of raising digital natives and the principles how to effectively lead digital natives. At 41 years old, I am one of the older digital natives. I grew up and spent much of my time on a Commodore 64 computer. Just as urban immigrant parents leave their children unsupervised in the city, my parents, as digital immigrants, left me completely unsupervised on the computer and online. The result was that I became a computer hacker. When many of my friends were arrested for computer hacking I got scared. I stopped all hacking and was never arrested like my friends were. I also was exposed to pornography at a friend’s houses where their parents gave them unsupervised access to cable television, including channels with pornography. Later in life, I went through addiction recovery to reestablish purity after the impact that early exposure to pornography had on me.

Today many parents are digital immigrants. They allow their children to watch TV, play games, and go online with little or no supervision. The result of this is that 9 out of 10 children aged between the ages of 8 and 16 have viewed pornography on the Internet, in most cases unintentionally (Livingston, 2004). The information age is bringing many benefits, but it also brings problems like gaming/tech addiction, pornography, online affairs, online predators, cyber bullying, and online fraud. I know a lot about these dangers because TechMission developed SafeFamilies.org through a United States Department of Justice Grant to help protect children from these dangers.

For some parents, the solution is to completely unplug their children and avoid technology, which I think is the technology equivalent of White flight. My view is all technology is bad is as ethnocentric as saying that all urban culture is bad. I remember having a friend growing up who never played a video game; honestly, he was a social outcast. It was like he spoke a different language than the other kids. I’m concerned these children will be like children who grow up with over-restrictive parents, and then once they are on their own, they are like “sheep before wolves” and go wild. The solution is to parent with informed balance between the extreme permissiveness and extreme avoidance. The challenge for most digital immigrant parents is that they need to learn the language of their children.

I am raising my children with an attitude toward exposing them to technology and its problems very similar to my attitude toward exposing them to urbanization and its problems. As a digital native, I am fluent in digital culture. I know what “streets to avoid” in the virtual world and how to protect my children. I give my children unlimited access to their iPads, but I ensure that they only have access to educational games. We provide non-educational games as we would dessert—reserved for special occasions. I monitor the effect that media has on my children and remove it if it starts to harm them. As a result, I am raising children with extremely strong digital literacy skills that are growing up in the virtual world but are not of it. My hope is that this early immersion in technology will help them as my early exposure helped me to become a leader in the tech world, but in their case I hope to minimize more of the negative aspects by more involved parenting in their technology use.

## Incarnational Ministry Among Digital Natives: Become a Jew to the Jews and a Geek to the Geeks

What does it mean to contextualize the gospel to techies and the digital native generation? There are a lot of ways to do that. One is to start with the language of that group, people should immerse themselves. We all have an ethnocentric view of technology that is tied to our generation. This is captured in the quote by Alan Kay: “Technology is anything invented after you were born; everything else is just stuff” (Kay, n.d.). If we understand technology is a culture, then we understand that our own view toward technology will be generationally specific, so we can avoid being ethnocentric.

Paul is often misquoted as saying “I became a Jew to the Jew and a Greek to the Greeks.” While that quote is not exactly what Paul said, it does contain the core of his strategy of cross-cultural missions. Because of this, that phase is the foundation of all effective missions. Just as Jesus met us as we are, we are called to meet others in their own cultural contexts. An immigrant to another country will never be native to that country, but they can become bilingual and bicultural as effective missionaries do. The same principle applies toward digital immigrants living in the information age. They should learn the language and culture of digital natives and attempt to become bicultural and bilingual.

TechMission’s strategy for technology fluency is very similar to many Spanish-speaking churches that want all their members to become bilingual. In these churches, native Spanish speakers are encouraged to learn English, and native English speakers need to learn Spanish. Some meetings are held in Spanish, English or both. This supports community among first and second generation immigrants that experience language and cultural generational divides.

Similarly, anyone who becomes staff at TechMission needs to become bilingual across technology. We use the term “techie” to refer to people who are bilingual and can both communicate with tech people and with non-tech people. If someone is a digital immigrant, they need to learn to speak some technology, which naturally happens through immersion at TechMission. In our orientation, we explain that we want all our staff to strive be techies. We explain that the reason why people use the term *nerd* or *geek* to refer to techies is because those are terms used to describe techies that do not know how to communicate with non-techies. If someone has a tech background, they need to learn to communicate their concepts to non-techies. Staff who avoid identifying as techies and show signs of being technophobic or techies who cannot translate tech to normal people are penalized on their scorecard in staff evaluations.

By placing techies as the norm, it affirms the value of techies and encourages everyone to grow. We also help contextualize the Gospel through our Theology of Technology course. We describe Jesus as the first techie. We explain that the word the Bible uses to describe Jesus’ occupation is *tektōn*, which has the same root as where we get our word for technology. He used the tools of the day to build things. In doing this, we are contextualizing Jesus and the Gospel into tech culture in a way that validates their identities as techies.

## Indigenous Leadership Development for the Information Age and Tech Tokenism

The top tech companies today like Google, Facebook, and Apple, they have one thing in common. They are able to recruit and keep the top technology leaders in the world. Much of Google’s recent strategy and acquisitions make little sense unless you understand the principle that if Google can appear to be the most exciting place to work for tech leaders, it will become the global leader in technology. Many articles have been written about how Google is becoming the “Bell Labs” of the current generation by attracting the top technology minds in the world (Litwak, 2013). As a tech architect, I recognize that part of the reason for this is that in the tech world a top performer can produce exponentially more results. This is summarized in the quote by Bill Gates, “A great lathe operator commands several times the wage of an average lathe operator, but a great writer of software code is worth 10,000 times the price of an average software writer" (“101 Great Computer Programming Quotes,” 2009). The point is that these tech leaders and companies value techies immensely.

Much of my job for the past 15 years at TechMission has been to learn to lead Christian techies. To lead them, it starts by valuing them. As organizations attempt to change their tech cultures, it can be helpful to learn lessons from churches that try to make cultural shifts.

As many churches and ministries try to become “diverse,” they often resort to what is called *tokenism*. An example of tokenism is when a White church puts their one person of color in their congregation up front to do announcements, but nothing else changes about the culture of the church to make it more welcoming to minorities. Tech tokenism is when an organization that has a technology-resistant culture tries to solve its problem by hiring a techie but leaves the rest of the organization the same. The organization is full of digital immigrants who do not care to learn the new language of tech. The result is that even if the organization adds more techies, they are all marginalized into a tech division that does not affect the core culture of the organization. This failure of the core of an organization to adopt a new cultural context is why most organizations fail to adapt to technology shifts (Moore, 1991).

At TechMission, we recognize the importance of attracting leaders in technology. Right now, our top priority as an organization is our Master’s program in Technology and Ministry. The reason it is our top priority is that I recognize that TechMission will rise and fall based on the technology leaders we have in our organization. As many universities have found, one of the best ways to recruit the top leaders in an area is to have a strong degree programs. We want to have strong tech leaders, so our top priority is to create a program to train tech leaders.

## Relationship of Digital Natives, Techies, Bilinguals and Age-Outs

Figure 23 uses a diffusion of innovation chart to explain the relationship between techies, digital natives, bilinguals and age-outs. The bottom part of the graph shows the standard theory of diffusion of innovation (Rogers, 2003) showing there is a normalized pattern of adoption based on how long it takes various people to adopt the technology (shown in the blue bell curve). People are groups as shown in the bottom: innovators, early adopters, early majority, late majority and laggards. The top part of the figure attempts to relate the cultural groups discussed in this paper to when in the innovation cycle they typically adopt technology. In this graph, techies are typically innovators or early adopters.

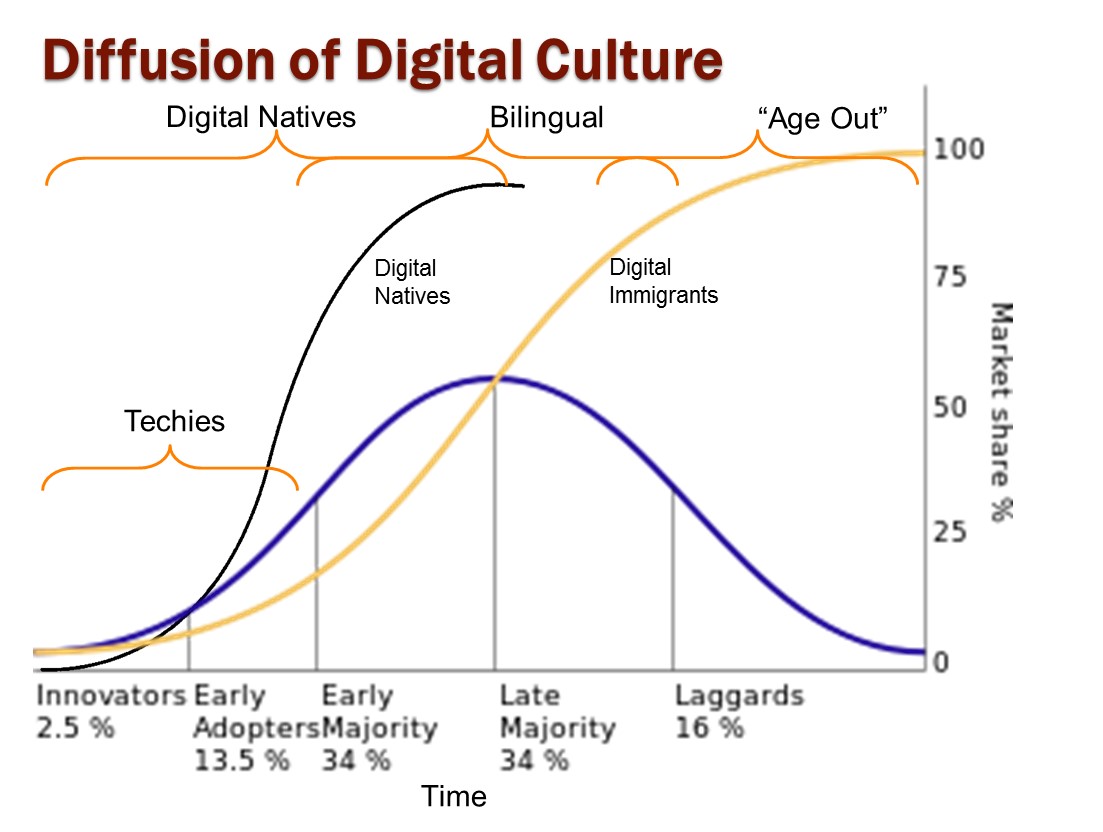
The “S-curves” show the percentage of adoption (from 0 to 100%) for digital natives (black line) and everyone (yellow). These curves show that that the whole population of digital natives are very quick to adopt many new technologies (early majority), compared to the overall population. The other two groups are the bilinguals, which may adopt technology early or later, but will be intentional about becoming fluent in it. The last group, the “age outs” typically will not invest the effort to learn the new language, and the proportion of society using that innovation increases over time through retirement and death.

Figure 23. Cultural Groups and Diffusion of Digital Culture

Techies are the natural leaders of digital natives in the tech domain. This does not mean that techies will be the natural leaders of digital natives in society in general. It only means that the tech leaders at Facebook, Google, and other tech companies are shaping the architecture of the world that makes them the de facto leaders of digital natives. Many digital natives will still avoid the identification as being a “techie” because that still associate it with pejorative terms like *geek* and *nerd*. If an organization wants to lead in technology, it needs to be able to attract the techies, establish a “digital native” dominant-culture, and strongly encourage digital immigrant staff to become bilingual with that culture

## Case Studies of Why Technology Leadership Fails

In learning technology leadership principles, it can be helpful to learn from case studies of some examples of why technology leadership often fails in ministry. At TechMission, we have worked with building the technology capacity of hundreds of ministries through conferences, degree programs, and consulting. In this section, I will use some examples from our experiences as why technology leadership fails.

**Ministry X and Tech Tokenism.** Ministry X decided that they needed to make technology a priority. At first they hired a third party consultant, but they were only willing to spend about $1,000 per year, which was less than 1% of their budget. That consultant told them that the most important action they could take as an organization would be for the leadership and staff across the organization to become technologically fluent. They decided to hire internal tech staff, which took up about 20% of their budget. Their technology systems improved a bit, but they kept losing tech leaders. This ministry was not effective because the leadership at first did not invest in tech, and then only invested in tech tokenism. If they had applied principles of incarnational ministry by ensuring that their original leaders and staff became bilingual with technology, it is likely that they could have retained more tech leaders to enable them to succeed.

**Church X and the Tech Law of the Lid**. This church lived in one of the top technology hotspots in the world. It also had one of the largest technology ministries in any church. Unfortunately, the pastor of the church had incredible vision for arts ministry but no vision for technology ministry and would not put any resources behind it. The result was that the top tech leaders in the church had to go outside the church to exercise their tech leadership. The technology ministry eventually disbanded. John Maxwell describes one of his principles of leadership as the Law of the Lid (Maxwell , 2007). Maxwell’s law of the lid is that a level 7 leader can only lead other leaders up to a level 6, so that their leadership level effectively sets a lid on the strength of their leaders. The same principle applies in the strength of a leader in technology. The organization leader doesn’t have to be a 10 tech leader to attract level 10 tech leaders (although it helps). The top leader needs to value technology enough to 1) become bicultural across tech enough to see the vision of other techies, 2) be willing the put the appropriate resources toward tech to attract level 10 tech leaders. The “lid” becomes the leader’s ability to invest appropriate resources in the appropriate areas of technology needed to attract tech leaders. This church was full of level 9 and 10 tech leaders but only put resources needed to sustain level 1 or 2 tech leaders.

**Relational Ministry X.** This ministry recognizes that the “neighborhood is changing.” and if it does not improve its technology strategy, then it will lose its relevance in the next 10-20 years. The challenge is that its core competency is relational ministry. Because of that, nearly all of its staff are digital immigrants that are resistant to technology because it can become a barrier to relationship. As an organization, it has essentially defined its identity as being technology-resistant. The younger tech staff have tried to argue that the generational influx of digital natives in society makes the ministry comparable to a White, English urban church in a soon-to-be all-Spanish neighborhood. To succeed, the church would need to recognize change in the environment and stop defining its culture as a White English church. Similarly, the ministry needs to stop defining its understanding of relational ministry as being opposed to technology. The ministry experiences a slow decline both due to changing demographics and the increasing cost of having such a highly relational model. What needs to happen is for the top leadership to be intentional about changing the culture of the organization. The leader can either choose to create an integrated bilingual culture where everyone must learn the language of the other or create a “church plant” of a different culture within the organization. Many institutions of higher education do this by creating a separate online division with a distinct culture from the rest of the organization. This new organization can still retain much of the relational DNA of the original ministry, but it will need to consider questions like “What do very relational online courses look like?” rather than “We just cannot do online courses with our values.”

# Chapter 7: Methodology for Master’s Degree in Technology and Ministry

In developing the MTM program, we followed the research methodology listed in Chapter 2, which is as follows:

1. Researching and comparing similar Master’s programs and courses. The results of this are in Appendix A. It appeared that the closest degree program to our Master’s in Technology and Ministry is the field of Science, Technology, and Society, so those were the primary degrees we compared. Secondarily, the other closest degree programs were Social Entrepreneurship degrees with strong technical components or Christian technology management degrees.
2. Developing an advisory board where I interviewed and surveyed many experts in the field, including potential employers, academics in the field, leaders in technology and ministry, partners, staff and potential students. These survey results are shown in Appendix D. The survey feedback was incorporated into the design of this proposal and the courses.
3. Developing an assessment plan (see Appendix E)
4. Writing degree proposal;
5. Conducting research on courses covered in the Master’s program (see reference list, literature review and Appendix C).
6. Developing courses myself as well as writing specs, project managing and modifying the courses developed by the consultants (see Appendix C)
7. Submitting proposal to Accreditors, peer reviewer and Missouri Department of Higher Education**.** The program has been designed based on feedback provided by reviewers.
8. Launch program. The program was launched August 2014 and currently has our first cohort of students.

# Chapter 8. Conclusion: From the Garden to the City

The Bible begins in a garden but it ends in a heavenly city. The journey from the garden has included three waves of history in the Agricultural, Industrial, and Information ages. It is interesting to note that in the city in heaven there will be gardens. This is symbolic that technology will be reconciled and harmonious with nature. We live in a fallen world, but have access to redemption. As Christians it is our role to bring the redemption of Jesus to the world. A significant part of that is assisting society through the revolutions that come with these historical shifts. Our role as Christians today is to help society adjust to the information revolution by meeting the felt needs and spiritual needs it brings.

This paper examined the prospect of disruptive innovation in higher education and its implications both for Christian higher education and the poor. There are two major trends are likely to shape whether Christian higher education will play a larger or smaller role in the global higher education system. One will be the trend toward consolidation as global technology courseware platforms begin to dominate higher education. This could result in an increasing role for Christian higher education as a larger portion of global higher education becomes private, but it could also increase secularization if Christians do not effectively use these platforms. The other trend is the growth of higher education outside the Western world, which could increase or decrease the role of Christian higher education depending on how Christians respond. It will be critical for Christians to take an active role in participating in disruptive innovation in higher education, and a key component of that will be to develop scalable, low-cost institutions providing a good enough education.

There are also two major forces affecting whether the poor will be helped or hurt by the coming changes. The trend toward automation is one that has significant potential to hurt the poor through the prospect of long-term technological unemployment. The trend toward massification of higher education accelerated by disruptive innovation has the potential to help the poor. Whether the net effect of these two trends is to help or hurt the poor will ultimately depend on whether we are able to more quickly educate the poor for new jobs than we eliminate jobs through automation.

In observing these overwhelming macro-forces that could have tremendous impact on Christian higher education and the poor, the Serenity Prayer by Reinhold Neibuhr provides a helpful framework: “God grant me the serenity to accept the things I cannot change; courage to change the things I can; and wisdom to know the difference” (“Serenity Prayer,” 2015). These macro-forces are outside our control, but how we respond to them is within our control. It is possible that the macro-forces are so large that that despite all our efforts they may result in both decline in Christian higher education and the poor being harmed or possibly just the opposite. God is in control of that. If we are knowledgeable of what the forces are and have the wisdom and strength to respond effectively, then we do know that Christian higher education and the poor will be better off that if we made no effort.

One key conclusion to this project is that technology leadership will be critical to the future of Christian higher education. Because of this, the second part of this project developed a Master’s program in Technology and Ministry to train students in these leadership principles.

In the transitions of the agricultural and industrial ages, Christians led the world in providing new forms of education needed to adapt to the changes. The question is whether Christians will do the same for the information age. Many Christians fear the dystopian futures created by technology. If we do not redeem technology and cultivate the earth as we are called, then those dystopian futures might happen. If the Church follows God’s plan for technology, then we can help show the world a bit of the Kingdom of Heaven here on earth through our love and God’s power. Jesus said that the summary of the Bible is essentially, “Love God, love others.” The job of the Christian technologist is to assess how to use technology to make us more effective at loving God and others.

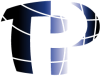
# APPENDICES

## Appendix A. Comparable Degree Programs



**Appendix Other Comparable Programs at Accredited Universities**

This degree program is modeled after Science, Technology and Society (STS) program (CIP Code: 30.1501), but will have some significant differences in that it will be Christian and it will be much more practical than many STS programs. See full list of Science, Technology and Society Programs at: <http://www.stswiki.org/index.php?title=Degree_programs>

https://lh6.googleusercontent.com/Gk4e4EvkHWaIqFFk6sllkRVJg_MaDA7HO2ZK3IlGKhNFw8UF1LTgzHCmnWQOuIUvEZvmhhIWTRoPIqtQsUhM95-CQP_BwthM7ELiHYjt2Kbq33WnhXs

Massachusetts Institute of Technology

77 Massachusetts Avenue

Cambridge, MA  02139

<http://tppserver.mit.edu/index.php?id=55>

**Technology and Policy SM Curriculum**\* Required courses: ESD.10, 14.003, ESD.132, ESD.103J, ([15.011](http://student.mit.edu/catalog/search.cgi?search=15.011&style=verbatim) or [14.003](http://student.mit.edu/catalog/search.cgi?search=14.003&style=verbatim))  
  
Electives in the major area:

[ESD.10](http://student.mit.edu/catalog/search.cgi?search=ESD.10&style=verbatim) Introduction to Technology and Policy (12 units)

[15.011](http://student.mit.edu/catalog/search.cgi?search=15.011&style=verbatim) Economic Analysis for Business Decisions (12 units) or [14.003](http://student.mit.edu/catalog/search.cgi?search=14.003&style=verbatim) Microeconomic Theory and Public Policy (12 units)

[ESD.801](http://student.mit.edu/catalog/mESDa.html) Leadership Development Seminar (3 units)

[ESD.132](http://student.mit.edu/catalog/search.cgi?search=ESD.132&style=verbatim) Law, Technology and Public Policy (12 units)

[Engineering Systems Concentration](http://tppserver.mit.edu/index.php?id=55#esc) Elective (9-12 units)

[ESD.103](http://student.mit.edu/catalog/search.cgi?search=ESD.103&style=verbatim) Science, Technology and Public Policy (12 units)

[Thesis](http://tppserver.mit.edu/index.php?id=55#thesis) (12 units)

[ESD.80](http://student.mit.edu/catalog/search.cgi?search=ESD.80&style=verbatim) Research Seminar (3 units)

[Thesis](http://tppserver.mit.edu/index.php?id=55#thesis) (12 units)

[ESD.811](http://student.mit.edu/catalog/mESDa.html) Internship Seminar (3 units – OPTIONAL)

[Engineering Systems Concentration](http://tppserver.mit.edu/index.php?id=55#esc) Elective (9-12 units)

**Arizona State University**

<http://sciencepolicy.asu.edu/content/degree-info>

**Professional science master's in science and technology policy**

**degree requirements**

The program requires 30 credits of coursework including an oral defense of a written Applied Project report (HSD 593), a Policy Workshop in Washington, DC (HSD 505), and an Internship (HSD 584):

The 30 credits include:

* **6 credits of required core courses:**
  + HSD 501 - Science and Technology Policy (3 credits)\*
  + HSD 502 - Advanced Science and Technology Policy (3 credits)\*
* **6 credits of Restricted Electives from a list provided by the Program Chair - some options are:**
  + BIO 591 - Uncertainty in Decision Making (3 credits)\*
  + BIO 515 - Science, Technology and Public Affairs (3 credits)\*
  + HSD 503 - Governing Emerging Technologies (3 credits)\*
  + GTD 501 - Global Technology and Development (3 credits)\*
  + HSD 598 - Human Dimensions of Global Climate Change (3 credits)\*
  + HSD 504 - Analysis of Large Scale Socio- Technological Systems (3 credits)\*
  + HSD 598 - Technological Change, Governance, and Public Policy (3 credits)\*
* **6 credits of applied policy analysis courses:**
  + HSD 593 - [Science and Technology Policy Applied Project](http://sciencepolicy.asu.edu/content/applied-projects) (3 credits)\*
  + HSD 505 - [Science and Technology Policy Workshop](http://sciencepolicy.asu.edu/content/dc-policy-workshop) (3 credits)\*
* **3 credits of Internship:**
  + HSD 584 - [Science and Technology Policy Internship](http://sciencepolicy.asu.edu/content/internships) (3 credits)\*
* **9 credits of Electives**

\*Core Courses, Restricted Electives, Applied Project, Internship, and D.C. Policy Workshop are offered through CSPO AZ and CSPO DC. Some Electives courses are also available at both locations.

Drexel University

<http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/#degreerequirementstext>

Master of Science in Science, Technology, and Society

**Degree Requirements**

The program requires 45.0 credits of coursework. At least 36.0 credits must be in the Department of History & Politics. Required courses total 27.0 credits (including a 3-credit research seminar, a 3-credit practicum, and 6 credits of research and writing for the thesis, which may be tied to the practicum). Remaining credits are chosen from a list of electives.

|  |  |  |
| --- | --- | --- |
| **Basic Requirements** | |  |
| [HIST 501](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Introduction to Science, Technology and Society | 3.0 |
| [HIST 585](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Technology in Historical Perspective | 3.0 |
| [HIST 586](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Explorations in Technology and Gender | 3.0 |
| or [PSCI 573](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Gender, Race and Science | |
| [PSCI 555](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | International Political Economy and Technology | 3.0 |
| Select one of the following: | | 3.0 |
| [PSCI 571](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Science and Technology Policy |  |
| [PSCI 557](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Globalization and Transition |  |
| [PSCI 541](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Technology in Developing Nations |  |
| [PSCI 570](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | International Environmental Policy |  |
| **Advanced Requirements** | |  |
| [HIST 696](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Seminar in Science, Technology, and Society | 3.0 |
| or [PSCI 696](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Seminar in Science, Technology, and Society | |
| [HIST 697](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Practicum: Science and Technology in Action | 3.0 |
| [HIST 698](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Master's Thesis | 0.5-9.0 |
| or [PSCI 698](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Science Technology and Society Thesis | |
| **Suggested Electives** | | **9.0** |
| Select three of the following: | |  |
| [HIST 560](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | History of Information Science and Technology |  |
| [HIST 583](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | History of Medicine and Disease |  |
| [HIST 584](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Historiography of Science |  |
| [HIST 586](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Explorations in Technology and Gender |  |
| [HIST 590](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Themes in the History of Science |  |
| [HIST 591](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Themes in the History of Technology |  |
| [PSCI 541](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Technology in Developing Nations |  |
| [PSCI 555](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | International Political Economy and Technology |  |
| [PSCI 557](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Globalization and Transition |  |
| [PSCI 570](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | International Environmental Policy |  |
| [PSCI 573](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Gender, Race and Science |  |
| [PSCI 574](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Alternative Policy Perspective |  |
| [PSCI 575](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Appropriate Technology for Development |  |
| [COM 650](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Telecommunications Policy in the Information Age |  |
| [COM 690](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Special Topics |  |
| [MGMT 602](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Managing Technology Innovation |  |
| [PSY 612](http://catalog.drexel.edu/graduate/collegeofartsandsciences/sciencetechnologyandsociety/) | Psychology of Human-Computer Interface Design |  |
| **Remaining Electives** | | **9.0** |
| Any remaining electives may be taken in the Department of History & Politics or other departments and colleges in the university, chosen in consultation with the STS faculty. | |  |
| Total Credits | | 45.0 |

Virginia Tech

The Master's Program in Science and Technology Studies

The STS Program explores interdisciplinary approaches to the study of science, technology, and society. Graduates emerge with an ability to identify and examine the conceptual and social dimensions of science and technology simultaneously and in historical perspective.

Achieving this capability at the Master's level enhances a range of undergraduate backgrounds, preparing graduates for intensive research training at the Ph.D. level or qualifying them for positions in government and industry that require addressing and managing complex problems with both technical and non-technical aspects. In addition, the Master's degree can serve as a career enhancement for those whose technical training does not fill their job needs, as a means for opening new career opportunities, and as a broadening experience for those who desire a degree for its own sake.

**Plan of Study**

Each M.S. student should develop their formal Plan of Study in consultation with their advisory committee. The Graduate School permits STS students to submit the Plan of Study prior to completing 20 credit hours rather than the 12 hours required for most other graduate students. Students are to submit the Plan of Study form with approving signatures from committee members and the STS director to the Center secretary. To change a plan of study once it has been submitted, students must submit a [Change of Plan](http://www.sts.vt.edu/documents/Chg_Plan.pdf) form to the Graduate School.

* [Science & Technology Studies Track](http://www.sts.vt.edu/documents/MS_STS_Track.doc)
* [History of Science & Technology Track](http://www.sts.vt.edu/documents/MS_HST_Track.doc)
* [Philosophy Track](http://www.sts.vt.edu/documents/MS_Phil_Track.doc)
* [Social Studies Track](http://www.sts.vt.edu/documents/MS_Soc_Track.doc)
* [Masters Plan of Study effective July 1, 2011](http://www.sts.vt.edu/documents/MSPOS2011.docx)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| DEGREE REQUIREMENTS — Science & Technology Studies | | | | |
|  | | | **Credits** | **Semester** |
| I. STS Core Requirement – 6 credits | | |  |  |
| STS 5424: Topics in Science and Technology Studies: Introduction to STS | | | 3 |  |
| STS 5514: Research Designs and Practices for STS | | | 3 |  |
| Choose two course from the following:- **6 credits** | | |  |  |
| STS 5105:Contemporary Issues in Science & Technology Studies | | | 3 |  |
| STS 5106: Contemporary Issues in Science & Technology Studies | | | 3 |  |
| STS 5205: Main Themes in the History of Science & Technology | | | 3 |  |
| STS 5206: Main Themes in the History of Science & Technology | | | 3 |  |
| STS 5305: Main Themes in the Philosophy of Modern Science & Technology | | | 3 |  |
| STS 5306: Main Themes in the Philosophy of Modern Science & Technology | | | 3 |  |
| STS 5614: Introduction to Science and Technology Policy | | | 3 |  |
| II. Additional STS Requirements – 12 credits | | |  |  |
| Two courses must be from one field and one course from STS as defined by your committee and with the approval of the graduate director. E.g., philosophy of science and technology, history of science and technology, politics and policy of science and technology, bio-ethics, environmental studies. | | |  |  |
| Elective 1: | | | 3 |  |
| Elective 2: | | | 3 |  |
| Elective 3: | | | 3 |  |
| Elective 4: | | | 3 |  |
|  | | |  |  |
| **III. M.S. Thesis (Minimum of 6, Maximum** **of 10 Credits)** | OR | **Non-thesis option - Two additional STS courses** |  |  |
| STS 5994: Research & Thesis | 3 | STS Course 1: | 3 |  |
| STS 5994: Research & Thesis | 3 | STS Course 2: | 3 |  |
| TOTAL | 30 CH |

University of Edinburgh

MSc by Research in Science and Technology Studies

**[Apply Now](http://www.ed.ac.uk/studying/postgraduate/degrees?id=322&cw_xml=details.php)**

**The deadline for applications to this programme for September 2013 entry is 15 August 2013.**

The MSc(R) in Science and Technology Studies is aimed at students who intend to go on to pursue a research career, within or outside academia, in this interdisciplinary field. Coursework combines a general training in social science research methods with a selection of optional courses. For students progressing to a PhD, the dissertation at the end of the MSc(R) normally takes the form of a full research proposal and/or pilot study in preparation for the empirical stage of their doctoral research. See what our [alumni](http://www.sps.ed.ac.uk/gradschool/research_masters_programmes/msc_r_science_and_technology/alumni_interviews) have to say about their experiences in the MSc(R).

**Science and Technology Studies**

Internationally renowned as the home of the Edinburgh School, with its characteristic "strong programme" in the sociology of scientific knowledge, the Science, Technology and Innovation Studies Subject Group has long been recognised as a centre of excellence for interdisciplinary studies of science, medicine and technology. Notably the subject group is home to [Innogen: the ESRC Centre for Social and Economic Research on Innovation in Genomics](http://www.innogen.ac.uk/) and thus is able to offer a wide range of research topics to support. More on the ongoing research in the subject group can be found at[www.stis.ed.ac.uk](http://www.stis.ed.ac.uk/#STIS).

Academic expertise in science and technology studies is drawn from across the university to provide training and supervision for our research students. Students take a programme of coursework combining training in research methods with specialist courses that are specific to their needs and submit a full research proposal for examination in their first year. This is followed by supervised research leading to the production of a PhD thesis. Students who have a solid background in STS may be accepted directly into our PhD programme, however most students will be required to first do a foundational MSc by Research in Science and Technology Studies.

Programme

A normal programme involves successful completion of the following training courses in the Graduate School of Social and Political Studies:

* [Research Skills in the Social Sciences: Data Collection](http://www.sps.ed.ac.uk/gradschool/prospective/research_masters_programmes/course_Information/research_courses_a-z/research_skills_in_the_social_sciences_data_collection)
* [Core Quantitative Data Analysis for Social Research](http://www.sps.ed.ac.uk/gradschool/prospective/research_masters_programmes/course_Information/research_courses_a-z/core_quantitative_data_analysis_for_social_research)
* [Research Design](http://www.sps.ed.ac.uk/gradschool/prospective/research_masters_programmes/course_Information/research_courses_a-z/research_design)

and a selection of courses from those offered by the STIS subject group appropriate to the student's topic, background and needs. These courses include Science, Knowledge and Expertise; Understanding Technology; Internet Society and Economy; Energy Policy and Politics; and Social Dimensions of Systems and Synthetic Biology.

For a full list of courses available for 2012/13, please see [here](http://www.drps.ed.ac.uk/12-13/dpt/prmscsctst1f.htm).

In addition students will work through the year with their supervisors on a systematic review of the secondary literature in their proposed area of research. Supervisors will also advise students of the most appropriate further training in their area of research interest.

Dissertation

The dissertation constitutes the main work in which students demonstrate the extent to which they have achieved the crucial learning outcomes from the first year of research training. It normally takes the form of an extended research proposal with the following components:

* a review of the literature, both theoretical and empirical;
* an outline of the specific questions to be addressed, a statement of research design and methods to be employed;
* an evaluation of the expected contribution of the study to knowledge in the field;
* consideration of the practical, political and ethical issues affecting the conduct of the research;
* a presentation of the schedule for the research, and (where appropriate) its estimated budget.

Where the degree is taken as a stand-alone degree, the dissertation normally includes a component of data collection and analysis, or selection of theoretical documents and analysis.

**Degree Programme Table: Science and Technology Studies (MSc by Research) (Full-time) (PRMSCSCTST1F)**

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**Science, Technology, and Society MSc**

**This programme is custom-built for two sorts of students: (1) those seeking advanced training in the field in preparation for further work, such as PhD research, and (2) those seeking skill development and professional qualification.**

All modules are designed for efficient use of your time. Each is structured around 20 classroom hours (normally 2 hours per week over a 10-week teaching term). Assessment varies between modules. Some ask for one 5,000 word essay. Others ask for combinations of shorter writing, or they develop different types of projects. A full-time student's week typically involves 4x2-hour seminars, independent study, research and writing time, plus participation in the busy social and intellectual life of London's largest STS/HPS department.

UCL information for this degree ([**link**](http://www.ucl.ac.uk/prospective-students/graduate-study/taught/degrees/tmshpssstm01)).

Programme structure (degree)

One compulsory module

HPSCGA01 Introduction to Science and Technology Studies  
This module introduces key concepts and literature associated with STS and related specialties.

Three STS options

Students select three option modules from our STS catalogue.

This includes modules in science policy and governance, science communication and engagement, and sociology of science. Some modules survey the discipline. Others are research-led, using our expertise to develop your skills at the cutting edge.

Our catalogue of STS modules includes:

* Science in the Twentieth Century and Beyond
* Science, Security, and Social Research
* Sociology of Science and Technology
* Curating the History of Science
* Science, Media, and Culture
* Practical Science Communication and Engagement
* Science, Technology, and Identity
* Responsible Science and Emerging Technologies
* Special Topics Seminar in STS

Also, because some of the HPS options we offer may equally be useful for STS students, we will consider substitutions that create a coherent programme of study. We want to be flexible, and we know ours is a broad and interdisciplinary field.

Not every STS module is taught every year, and these titles are subject to change. They do provide a sense of the depth and breadth on offer in the degree.

Two electives

Students select two elective modules from within our department or across UCL.

UCL has Masters-level modules in many, many fields. We've built our programme with flexibility so you can explore in directions you choose. If you want, you can focus in the department on STS and HPS, selecting other modules within our programme. If you seek complementary topics, we can guide you to the right choices.

Dissertation

Students undertake a research project of their own design, completing a 10,000-12,000 word dissertation. They work under the supervision of our academic staff.

Part-time option

Full-time students complete the degree in one year. Part-time student complete the degree in two years, normally following this plan:

Year 1  
-HPSCGA01 plus one other module in Term 1  
-two or three modules in Term 2

Year 2  
-two or three modules in Term 1  
-any remaining modules in Term 2  
-Dissertation

Other options

Post-Graduate Diploma (PG Dip) follows the same structure as the degree, without the dissertation.

Post-Graduate Certificate (PG Cert or PGC) requires three modules only, including HPSCGA01, our programme-wide survey module, plus two HPS options from our catalogue.

Diplomas and Certificates have no part-time option.

MSc Science, Technology and Society

Programme Code: TMSHPSSSTM01  
Faculty Code: MAPS  
PG Dip Code: TPPHPSSSTS01  
PG Cert Code: TCPHPSSSTS01

Biola

**Science and Religion**

The Master of Arts degree in Science and Religion is designed to provide individuals with the essential background in theology, history, and philosophy necessary to integrate modern science with evangelical Christianity.

The curriculum is designed for students who already have some background in the sciences; consequently the course work emphasizes the critical tools from other disciplines that are necessary for providing the proper context and foundation for understanding and working comfortably with issues that relate to both Christianity and the sciences. Special seminars focus on current theological issues within specific scientific disciplines so that students will understand the contemporary dynamic and learn to integrate their thinking in a mentored setting.

The program fosters in students a mature and informed Christian worldview from which to serve the Lord and to relate to their secular colleagues in the sciences.

The program is available in a format that combines distance learning and on-campus learning in an academically robust manner. This is a proven method of education that is designed to make the M.A. in Science and Religion available to students who cannot relocate to southern California for the course work. Some short-term campus visits are required during the summer, offering the opportunity to interact with faculty, fellow students, and preeminent guest scholars and lecturers.

The M.A. in Science and Religion program includes the following:

Science and Religion Core (8 units)

* [CSSR 529 Historical Perspectives in Science and Religion (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr529)
* [CSSR 530 Darwin, Evolution, and Design (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr530)
* [CSSR 631 Modern Physics, Cosmology, and Design (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr631)
* [CSSR 651 Intelligent Design Seminar (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr651)

Religious Studies Core (16 units):

* [CSSR 510 Research Methodologies (1)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr510)
* [CSSR 514 History of Christian Thought (3)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr514)
* [CSSR 516 Authority of Scriptural Traditions (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr516)
* [CSSR 519 Old Testament / Hebrew Literature (3)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr519)
* [CSSR 520 New Testament Literature (3)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr520)
* [CSSR 541 Christian Thought I (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr541)
* [CSSR 542 Christian Thought II (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr542)

Philosophy Overview (5 units)

* [CSSR 547 The Theology and Philosophy of Science (3)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr547)
* [CSSR 650 Introductory Philosophy Elective (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr650)

Electives (7 units)

* [CSSR 517 Interpretative Issues and Methods (3)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr517)
* [CSSR 526 Contemporary Christian Belief (3)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr526)
* [CSSR 540 Metaphysics and Epistemology (3)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr540)
* [CSSR 604 Science and Religion: Continuing Study (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr604)
* [CSSR 610 Elementary Principles of Biblical Languages (3)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr610)
* [CSSR 611 Beginning Greek I (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr611)
* [CSSR 612 Beginning Greek II (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr612)
* [CSSR 613 Elements of Hebrew I (3)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr613)
* [CSSR 614 Elements of Hebrew II (3)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr614)
* [CSSR 619 Archaeology in the Ancient Near East (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr619)
* [CSSR 621 Logical and Critical Thinking (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr621)
* [CSSR 622 Issues in Epistemology (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr622)
* [CSSR 624 Issues in Metaphysics (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr624)
* [CSSR 625 Philosophy of Religion (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr625)
* [CSSR 626 Ethics (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr626)
* [CSSR 627 Bioethics (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr627)
* [CSSR 628 Environmental Ethics (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr628)
* [CSSR 640 World Religions and Science (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr640)
* [CSSR 652 Human Origins Seminar (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr652)
* [CSSR 653 Origin of Life Seminar (2)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr653)
* [CSSR 660 Special Projects/Topics in Science and Religion (3)](http://www.biola.edu/academics/sas/scienceandreligion/courses/#sr660)

Students who already have a strong background in philosophy or Bible may, with their advisor's approval, take approved electives in place of the required units.

**University College London**

Science, Technology, and Society MSc

**This programme is custom-built for two sorts of students: (1) those seeking advanced training in the field in preparation for further work, such as PhD research, and (2) those seeking skill development and professional qualification.**

All modules are designed for efficient use of your time. Each is structured around 20 classroom hours (normally 2 hours per week over a 10-week teaching term). Assessment varies between modules. Some ask for one 5,000 word essay. Others ask for combinations of shorter writing, or they develop different types of projects. A full-time student's week typically involves 4x2-hour seminars, independent study, research and writing time, plus participation in the busy social and intellectual life of London's largest STS/HPS department.

UCL information for this degree ([**link**](http://www.ucl.ac.uk/prospective-students/graduate-study/taught/degrees/tmshpssstm01)).

Programme structure (degree)

One compulsory module

HPSCGA01 Introduction to Science and Technology Studies  
This module introduces key concepts and literature associated with STS and related specialties.

Three STS options

Students select three option modules from our STS catalogue.

This includes modules in science policy and governance, science communication and engagement, and sociology of science. Some modules survey the discipline. Others are research-led, using our expertise to develop your skills at the cutting edge.

Our catalogue of STS modules includes:

* Science in the Twentieth Century and Beyond
* Science, Security, and Social Research
* Sociology of Science and Technology
* Curating the History of Science
* Science, Media, and Culture
* Practical Science Communication and Engagement
* Science, Technology, and Identity
* Responsible Science and Emerging Technologies
* Special Topics Seminar in STS

Also, because some of the HPS options we offer may equally be useful for STS students, we will consider substitutions that create a coherent programme of study. We want to be flexible, and we know ours is a broad and interdisciplinary field.

Not every STS module is taught every year, and these titles are subject to change. They do provide a sense of the depth and breadth on offer in the degree.

Two electives

Students select two elective modules from within our department or across UCL.

UCL has Masters-level modules in many, many fields. We've built our programme with flexibility so you can explore in directions you choose. If you want, you can focus in the department on STS and HPS, selecting other modules within our programme. If you seek complementary topics, we can guide you to the right choices.

Dissertation

Students undertake a research project of their own design, completing a 10,000-12,000 word dissertation. They work under the supervision of our academic staff.

Part-time option

Full-time students complete the degree in one year. Part-time student complete the degree in two years, normally following this plan:

Year 1  
-HPSCGA01 plus one other module in Term 1  
-two or three modules in Term 2

Year 2  
-two or three modules in Term 1  
-any remaining modules in Term 2  
-Dissertation

Georgia Tech

**The History and Sociology of Technology and Science**master's degree program appeals to a broad range of students and professionals.

Those with technical backgrounds are exposed to broad socio-historical perspectives on science and technology, while those with backgrounds in the humanities and social sciences develop an aptitude for tackling scientific and technical questions. All students gain skills in social analysis and in oral and written communication, which serve to enhance employment opportunities in a variety of occupations. The master's in history and sociology can be a jumping-off point for further professional training in law, business, or public policy and is an asset to those seeking careers in museums, historical agencies, or other public history, and public service organizations. It is an excellent opportunity for those interested in high school or community college teaching and for current teachers seeking to upgrade their training and incorporate new materials into the classroom. In addition, it is often a first step for students pursuing the PhD.

Curriculum and Requirements

The master's program includes a series of foundation courses as well as more specialized reading and research seminars. Though a thesis is not required, the program emphasizes analytical and communications skills, gained through a methods course and a paper involving original research.

At present, a minimum of 30 semester hours are distributed as follows:

* HTS 6001 Social Theory (3 hours)
* HTS 6002 History of Technology (3 hours)
* HTS 7001 Foundations of Socio-Historical Analysis (3 hours)
* HTS 8002 Social and Cultural Perspectives on Technology and Science (3 hours)
* 18 additional hours, including at least 12 hours within HTS
* Note that up to six of these additional hours may be awarded as credit for independent study or for directed readings with individual professors. Students routinely receive three hours of independent study credit for completion of the required original research paper. Those pursuing sufficiently rigorous research agendas may receive as many as three additional hours; students who write two papers may receive three credit hours for each.
* Beyond the thirty hours, students are free to enroll in a mix of independent studies, special topics, and other courses as they and their advisors see fit.

The required research paper must be based on upon substantial original research. Ordinarily, students will pursue this assignment after completing HTS 7001 (Foundations of Socio-Historical Analysis) or in conjunction with that course. Research and writing are supervised by a member of the HTS faculty and chosen by the student with the agreement of the faculty member. The final paper must be read and approved by that person and by at least one other member of the HTS faculty, chosen by the faculty supervisor. Students should strive to produce papers suitable for publication in an academic journal, and they should expect to present their results to their peers.

|  |
| --- |
| Rensselaer Polytechnic Institute  Science and Technology Studies M.S.  [Print Degree Planner](http://catalog.rpi.edu/preview_program.php?catoid=4&poid=714&returnto=88) | [Print-Friendly Page.Print-Friendly Page](http://catalog.rpi.edu/preview_program.php?catoid=4&poid=714&returnto=85&print)  [Add to Portfolio](http://catalog.rpi.edu/portfolio_nopop.php?catoid=4&add=1&poid=714#programs) |
|  |

http://catalog.rpi.edu/return.gif Return to: [Programs](http://catalog.rpi.edu/content.php?catoid=4&navoid=88)

This program is designed for students with undergraduate training in the natural and social sciences, engineering, or humanities. In addition, many entering students have substantial career experience relevant to this program.  
  
Completing the M.S. degree in STS requires 30 credit hours, including a six-credit-hour master’s thesis or internship. Among the required core courses are STSS 6010 Concepts in Science and Technology Studies, STSS 6110 Research Methods for STS, STSS 6020 Research Seminar, and STSH 6020 Values and Policy. Also required is one additional 6000-level STS seminar (or an independent readings course with three or more students enrolled).  
  
The program offers an opportunity to take technical courses in other Rensselaer departments that are relevant to the student’s Plan of Study. It also offers substantial individual consultation and flexibility in designing course work and developing the thesis/internship option. Students may use the M.S. as a professional program or as a prerequisite for doctoral studies at Rensselaer or other universities.

## Appendix B. Program Grading Rubric

**FINAL PROJECT TEMPLATE AND INSTRUCTIONS**

**Formatting**

The final project uses the final project template linked in the online course. Except for Class Forum posts, all written assignments should be double-spaced using 12-point font and 1-inch margins, and include a relevant heading (name, date, assignment title), and subheadings where appropriate, which can be viewed in a Navigation Pane. Please correct spelling and grammatical errors before submitting all assignments. Spelling, grammar, and writing style will be taken into consideration in evaluating written work. Assignments should be submitted to the Course Dropbox within Moodle. Every assignment should carry a filename that MUST include your name (Student Name) and the assignment number, e.g. Jan\_Smith\_Minor1.doc Written work must be reflective, balanced, analysis and be well-supported by references. Deep familiarity with the biblical text will be appreciated as will the ability to showcase extensive theological reading and reflection and to critically examine an issue from many points of view. Students should use APA format for references and bibliography. It is recommended that students use a bibliography tool such as Endnote, Zotoro (free), Mendeley (free), etc.

**Chapter 1. Literature Review** (1-2 double spaced pages per book)

Write a review of the required books in this course and post to Amazon.com as a book review. The intent of this assignment is to help solidify your learning, demonstrate understanding of materials and to provide practice in writing effective reviews on Amazon.com. Your goal should be to write as helpful a review as possible given the audience on Amazon.com. As this is a public review, please keep criticism constructive, and if there are elements of your review that you would rather keep private post them in this document.

**Please list the web address/URL of your review and past the text of your review into this document**.   
To help increase the visibility of the program, students are encouraged, but not required, to use a phrase like “I reviewed this book for my Theology of Technology course as a part of my Master’s in Technology and Ministry program in City Vision College.” This follows our constructivist educational philosophy in the program by helping to:

1. Contribute to the open content resources of public book reviews
2. Build your reputation as a reviewer
3. Increasing the visibility of important books (more reviews=more visibility)
4. Increase the visibility of this Master’s program.

**Chapter 2. Project** (15-25 pages)

Follow the guidelines for the final project in this course.

**Chapter 3. Self-Evaluation, Reflection and Contributions for Future Courses** (2-3 pages)

This section is to provide room for self-evaluation, reflection and suggestions including the following elements:

1. Reflect on what you learned during this course and whether it met what you anticipated based on the course’s desired learning outcomes (goals or objectives), as well as your personal goals for the course.
2. We view all our whole program as an “open source” project where we are looking for students to contribute to make it better for the next group of students. What resources, materials or people would you suggest that might be able to contribute to this course? Any other suggestions for improvement?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Final Project Grading Rubric** | | | | | |
|  | | | **Score (0-100)** | **Weight** | **Weighted Score** |
| **Content Knowledge Demonstrates proficiency in content knowledge of the subject matter.** | | | | **0** | **0** |
| **Comments:** | | |  | **.25** | **23.75** |
| **Critical Thinking**  **Demonstrates clear and logical progression and conclusions.** | | | |  |  |
| **Comments:** | | | **0** | **.25** | **23.75** |
| **Communication**  **Writing is appropriate to selected audience, no style guide errors, good “flow,” with no grammar/spelling errors** | | | |  | 0 |
| **Comments:** | | | **0** | **.15** | **23.75** |
| **Application Relevant examples, clear steps and recommendations** | | | |  |  |
| **Comments:** | | | **0** | **.35** | **23.75** |
| **Late deductions (e.g., ):** | | | **0** | **0** | **0** |
| ***Score:*** | | |  |  | **95** |
| ***Overall Comments:***  -- | | | | | |
| **STM Rubric Explanations** | | | | | |
| **Insufficient (0-79)** | **Sufficient (80-89)** | **Proficient (90-100)** | | | |
| **Content Knowledge Students demonstrates proficiency in content knowledge of the subject matter.** | | | | | |
| * Does not demonstrate a worldview | * Demonstrates a knowledgeable worldview | * Demonstrates a diverse and knowledgeable worldview | | | |
| * The document does not demonstrate research of the literature on the subject matter. | * The document demonstrates research of the literature on the subject matter but at a level lower than at a masters. | * The document demonstrates research of the literature on the subject matter at a masters level. | | | |
| * Work does not indicate research method and/or analysis. | * Work indicates research but not appropriate for the purpose of the document/presentation | * Work indicates, as appropriate, knowledge, choice, and application of research method and analysis. | | | |
| * The work does not reference theories and concepts. | * Referenced theories and concepts are accurate but not sufficient or appropriate applied. | * Referenced theories and concepts are accurate, sufficiently detailed, and appropriately applied. | | | |
| * The author uses information from too limited a base of sources and lacks variety. | * The author uses information from a variety of quality electronic and print sources; but lacks relevance and/or balance. | * The author uses information from a variety of quality electronic and print sources; the sources are relevant, balanced, and include critical readings related to the article topic. | | | |
| * Does not demonstrate an understanding of culture. | * Demonstrates knowledge that culture contributes to shaping one’s viewpoint. | * Articulates the ways in which culture contributes to shaping one’s viewpoint. | | | |
| **Critical Thinking**  **Demonstrates clear and logical progression and conclusions.** | | | | | |
| * The purpose and premise is not presented. | * The author leaves it up to the reader to determine the purpose of the document. | * A clear introduction sets the stage for the reader to know what the article is about and how the document supports the premise. | | | |
| * The author fails to use structure. | * The author uses structure but is not fully appropriate. | * The author develops appropriate structure for communicating the topic. | | | |
| * Unwillingness to engage in difficult conversations | * Communicates from a position of dominant culture | * Willingness to engage in difficult conversations with tolerance of diverse viewpoints | | | |
| * The author fails to show evidence of either logic or transition | * The author shows evidence of some logic but fails to follow the tenets of good communication with regard to sequence and/or transition | * The writer communicates information in a logical, interesting sequence organized with smooth transitions that the reader can easily follow. | | | |
| * There is a lack of information. | * There is a lack of evidence of effective information. | * Accesses needed information effectively and efficiently. | | | |
| * Does not show evidence of application of learning to ethical and reflective practice. | * Shows evidence of applying global learning in ethical and reflective practice. | * Translates global learning into ethical and reflective practice. | | | |
| * Does not analyze issues. | * Analyzes issues from one perspective | * Analyzes issues from multiple perspectives. | | | |
| * Does not evaluate information. | * Evaluates information but lacks evidence of critical evaluation. | * Evaluates information and its sources critically. | | | |
| **Communication**  **Writing is appropriate to selected audience, no style guide errors, good “flow,” with no grammar/spelling errors** | | | | | |
| * The document/ presentation has an average greater than one error per page, slide, or one-minute of oral presentation. | * The document/ presentation has an average of one error per page, slide, or one-minute of oral presentation. | * The document/ presentation demonstrates an exceptional adherence to selected style, flow, grammar, punctuation, word-smithing, and correct use of the word-processor to handle formatting (zero errors). | | | |
| * Does not evaluate information | * Evaluates information but lacks evidence of critical evaluation | * Evaluates information and its sources critically | | | |
| * No evidence of ethical, legal, and socio-economic issues. | * Minimal evidence of ethical, legal, and socio-economic issues. | * Understands and follows the ethical, legal, and socio-economic issues surrounding the use of information and technology. | | | |
| * The document/ presentation does not show evidence of Biblical concepts. | * The document/ presentation shows evidence of Biblical concepts but inappropriate presentation to the audience | * The document/ presentation shows appropriate presentation of Biblical concepts relative to the audience and publication (plain-glass or stain-glass) | | | |
| * The document/ presentation shows more than four format errors. | * The document/ presentation shows up to four format errors. | * The document/ presentation adheres to the format dictated by the target publication or intended audience. The final product is suitable for immediate use. | | | |
| **Application Relevant examples, clear recommendations, to improve groups** | | | | | |
| * The document/ presentation does not show evidence of application | * The document/ presentation alludes to application but does not do so in a manner that is clear to the reader | * The document/ presentation presents information, concepts, conclusions, etc., so that the readers can use the information to improve/transform their lives and the global organizations in which they serve. | | | |
| * Does not show recognition of the impact of global issues on individual lives. | * Recognizes the impact of global issues on individual lives but does not show evidence of belief in collaboration | * Recognizes the impact of global issues on individual lives, and believes individual and collaborative action can influence the world | | | |
| * The document/ presentation lacks examples of how the recommendations might be applied. | * The document/ presentation provides examples of how the recommendations might be applied but the application is not relevant. | * The document/ presentation provides examples of how the recommendations might be applied at the personal, team or organization level. | | | |
| * The document/ presentation does not offer clear actionable concepts | * The document/ presentation presents information in manner that is not consultative but is one-way directive. | * The document/ presentation adopts a consultative approach by proposing clear, strategic, actionable, and practical steps that are readily transferable to technology and ministry contexts. | | | |
| * The document/ presentation lacks recommendations | * The recommendations are there but not clear and/or specific. | * The recommendations are clear and specific for the designated audience. | | | |

## Appendix C. Syllabi and Course Materials for MTM Program

### Master of Science in Technology and Ministry Degree Proposal

Following is the proposal for the Master of Science in Technology and Ministry as submitted and approved by the DETC. The actual active degree program may be now be viewed at www.cityvision.edu/mtm

Name of Program: Master of Science in Technology and Ministry

Representative Courses

* MTM 501. Theology of Technology\*
* MTM 502. Organizational Systems\*
* MTM 503. Theology of Work\*
* MTM 504. Emerging Media Ministry\*
* MTM 507. Capstone Project Design\*
* MTM 508. Technology and Ministry Capstone Project\*

Program Objectives: After completing the program, our students will be able to:

1. develop effective technology programs in a way that takes into account the unique cultures they will be serving and how to use technology to serve the poor and cross-cultural communities
2. understand the philosophy, theology and historical context of technology in ministry and how to apply that in professional settings
3. understand the vocation of Science, Technology, Engineering and Math (STEM) careers and their unique identity and role within their field in a way that maximizes their calling and enables ministry
4. understand complex systems in a way that helps them to effectively lead others and apply technology in ministry and professional environments
5. understand some of the limits of technology and how to counter some of the negative implications of technology and its effect on relationships and creation of new addictions
6. develop effective strategies for sustainable technology ministry initiatives by monitoring and understanding the latest theories, trends, tools and opportunities in technology in ministry and business professions.

This degree is in the field of Science, Technology and Society (STS) (CIP Code: 30.1501). In the same way that Christian institutions provide MBA programs, our MTM program is an STS program in Christian institution. As a program in a Christian institution, it will integrate faith into the courses and will have a practical value while staying within the basic framework of the discipline. The director of this program is a graduate of MIT’s STS program called Technology and Policy, and co-founded a multi-million dollar STS Research group called the Internet Telecoms Consortium.

Course Objectives

Course objectives are listed in each of the attached courses.

Needs Assessment:

There is a great need to bridge the worlds of science, technology and religion for 1) lay Christians who are in science and technology fields and 2) technology professionals in Christian ministries and churches. There are hundreds of thousands of technology professionals that are working in Christian ministries and millions of Christians in technology and science fields. In secular schools this need to bridge science, technology and social needs has been met by interdisciplinary programs in Science, Technology and Society; however, there are very limited resources for Christians to study Science, Technology and Society from a uniquely Christian worldview.

There are critical issues of how science and technology are affecting the world that can benefit from the wisdom, spirituality and faith of Christians. The Christian perspective provides a holistic, humanizing approach to help counter the dehumanizing effects of technology. The Christian perspective also helps address moral issues like technology-related addictions to pornography, gaming, gambling, computers and other online addictions. In addition, technology provides some unique opportunities to Christians and ministries through technology’s ability to bridge social divides among Christians and bring innovation for evangelism. Finally, there are large numbers of IT professionals employed in Christian ministries and churches that could benefit from a better understanding of technology and ministry.

Some of the key questions our students will be looking to answer are 1) How their STEM career path fits as a Christian vocation and how can it be used in ministry? 2) How can they think theologically about technology? 3) How can get the training I need to “move up” and improve my effectiveness in my current ministry or professional field?

There is a growing professional community of “technology ministers.” TechMission, the parent nonprofit organization of City Vision is at the center of this movement. Some of the examples of the growing community of Christians in STS include:

1. TechMission established the Association of Christian Community Computer Centers (AC4) that included over 500 Christian organizations addressing the digital divide (<http://www.techmission.org/cms/tm/ac4>). In the same way that City Vision’s Missions program was designed to equip members of the Association of Gospel Rescue Missions and similar ministries serving the poor, our Master’s degree program will help serve this community.
2. There is a growing community of Christians in STS. In the larger field of Christians in technology, there are over 100 books and a number of annual conferences. Our faculty and advisory board includes many of the leaders, writers and presenters from these communities. The consensus of these leaders is that there is a great need for our degree program. Some of these conferences include:
   1. Digital Society Conference at Seattle Pacific University (<http://spu.edu/depts/sbe/events/the-digital-society>)
   2. Connected Conferences at Abilene Christian University (<http://www.acu.edu/technology/mobilelearning/conferences/index.html>)
   3. Digital Ministry Conference at Biola ([http://events.biola.edu/bioladigital](http://events.biola.edu/bioladigital/))
   4. Mobile Ministry Forum ([http://www.mobileministryforum.org](http://www.mobileministryforum.org/))
   5. Association of Christian Community Computer Centers Conference
   6. International Conference on Computing and Missions ([www.iccm.org](http://www.iccm.org))
   7. GospelCom Technology and Ministry Conferences
   8. Christian Computing Magazine Conference

Target Market: The target audience for this program is people who have an undergraduate degree in STEM fields, but would like to bridge their expertise into either the world of professional or lay Christian ministry.

Because of limited resources, we will initially focus where TechMission and City Vision’s strongest expertise is: computer science/IT primarily with either lay or parachurch ministries.

Some of the assumptions of the students entering our program are that they might roughly be:

* **Degree Background:** 40% will have a degree in computer science/IT, 40% are techies from other STEM fields and 20% are self-taught techies with degrees in non-STEM fields
* **Employment:** Initially the majority of students will be techies working for Christian colleges, parachurches or churches; however, as the program matures, we expect that the majority of students will be Christians in STEM fields in secular jobs.
* **Outward/Inward:** 60-70% will be in roles using technology as ministry (outward) and 30-40% will be focused on supporting IT for the organizations operations (inward)
* **Leadership Interest:** 40% will have no leadership ambitions as they would rather focus exclusively on tech rather than people, 30% will be on a track to be a CTO and 20% will be on a track to be a CIO, 10% will be on a track to be a CEO

Some of the areas of employment for graduates from our program include technology staff at churches and ministries including computer programmers, information technology staff and chief technology/information officer. In addition, many graduates will continue to work in secular contexts in STEM careers, but will be better equipped to use their skills in volunteer lay ministry contexts and professionally. A third category of careers will be in secular nonprofit/governmental careers that are very similar to ministry careers where similar principles of appropriate technology use and social implications of technology will be critical issues.

Length of Program: The program is 36 credit hours with five 8-week terms in the year. A full-time student taking two courses per term would complete the program in 15 months with the understanding that students could complete the program in one to three years depending on whether they are full-time and whether they want to work on their Capstone in parallel with other courses.

Credit Hours & Requirements

36 credit hours for Master’s Degree.

**Required Courses (21 credits)**  Students in the program are required to take the following 3-credit courses:

* MTM 501: Theology of Technology (3 credits)
* MTM 502: Organizational Systems (3 credits)
* MTM 503: Theology of Work in the STEM Professions (3 credits)
* MTM 504: Emerging Media Ministry (3 credits)
* MTM 505: Appropriate Technology in the IT Field (3 credits)
* MTM 507: Capstone Project Design (1 credit)
* MTM 508: Technology and Ministry Capstone Project (5 or 8 credits)

**Electives (15 Credits)**: Because a major focus of this degree program is the interdisciplinary aspects of the program, **students are strongly encouraged to take up to 6 credits as transfer credits from other schools**. This will allow our students to take graduate courses to get increased depth in specific disciplines such as: Engineering, Computer Science, Business, Entrepreneurship, Sociology, Psychology and Theology.

We do offer the following classes that students can take as electives from City Vision. Additional electives will be added very soon after the degree program is offered.

* MTM 506: Technology and Addiction (3 credits)
* MTM 510: History of Technology in the Church (3 credits)
* MTM 511: High Tech Social Entrepreneurship (3 credits)
* MTM 512: Grant and Proposal Writing (3 credits)
* MTM 513: Independent Study (3 to 6 credits)
* MTM 514 Internship/Practicum (3 to 6 credits)

Policy on Determining Credit Hours: Each credit hour is equal to 45 hours of studying (1 hour per week online and 2 hours per week working on assignments or 3 x 15 = 45).

Costs: The cost per credit hour is $300. The cost of the entire program is $10,800. The students must buy their textbooks from an outside source although we have an online bookstore in partnership with Amazon. An estimated cost of textbooks for the program is $750.

Online Platform:

City Vision College uses Moodle, an Open Source Course Management System (CMS) for its e-learning platform. Our Moodle setup is running on Linux with data is stored in a MySQL database. We use the current version of Moodle (2.4), that was released in January 2013. Moodle has the basic features of most e-learning platforms, plus its open source license and modular design allow us to additional functionality as needed. And, because it is an Open Source application, development is undertaken by a globally diffused network of commercial and non-commercial users. Many third-party Moodle plug-ins are freely available. Moodle has a significant user base with 73.246 registered sites with 64,273,070 users January 2003.  *(statistics from moodle.org)*

The courses are offered via the Internet using a unique distance learning approach with the goal of working with actual ministries, churches and organizations as both "laboratory" and “classroom." The course work includes:

* Assigned readings
* Audio and video lectures and workshops
* Written research projects
* Online discussion and collaboration with other students and faculty members
* Other guided learning experiences

**Table of Faculty who will support the Program and Qualifications**

Note: The faculty teaching these courses are also the subject matter experts that developed the course materials.

|  |  |  |
| --- | --- | --- |
| Andrew Sears | City Vision College President  Executive Director of TechMission  Director, City Vision’s Technology and Ministry Master’s Program | Doctoral Student, Transformational Leadership, Bakke University (expected completion in 2014)  S.M. Technology and Policy at MIT  S.M. Computer Science at MIT  Founder, MIT’s Internet and Telecoms Consortium  B.S. Electrical Engineering, Missouri Science and Technology |
| Jay Gary | Graduate Program Director, LeTourneau University  CEO, PeakFutures | Ph.D. Organizational Leadership, Regent University  M.A. Education, California State University-Los Angeles  BS. in Industrial Management. Georgia Institute of Technology |
| John Edmiston | CEO, Cybermissions  Adjunct Faculty, Fuller | University of Queensland, Australia, BS Inorganic Chemistry, BS Psychology  Melbourne College of Divinity, Bachelor of Divinity (this is a post-graduate Bachelor's Degree equivalent to the US "M.Div.") |
| Lynda Mitton | Certified Addiction Counselor, ADAC II, About an Alternative, Colorado Springs, CO. | Doctoral Student Psychology, Capella University  MS, Addiction Psychology, Capella University  BS Organizational Management, Colorado Christian University, Colorado Springs, CO. |
| Michael Liimatta | Chief Academic Officer, City Vision | MA, Organizational Management, MidAmerica Nazarene  B.Th. Theology, Inter-Lutheran Theological Seminary |
| Fletcher Tink | Adjunct Professor, Nazarene Theological Seminary  Executive Director, Bresee Institute | Ph. D. Fuller Theological Seminary, School of Intercultural Studies  M.A. Fuller Theological Seminary  Master of Liberal Arts: Harvard  M.Th. Luther Theological Seminary  M.Div. Nazarene Theological Seminary  B.A. Eastern Nazarene College: |
| Barbara Clemenson | SDG Nonprofit Consulting  Adjunct Instructor, Case Western Reserve University | Executive Doctor of Management, Master’s in Accountancy, Case Western Reserve University.  Master of Arts in History, Cleveland State University.  Secondary Teachers Certification, Cleveland State University.  BA in History and Spanish, Associate Degree in Early Childhood Education, Ohio University  Certified Public Accountant and a Certified Fund Raising Executive. |

**Curriculum Review Committee/Advisory Board**

As described above, there is a growing community of Christian leaders in the STS field. City Vision has conferred with many of these leaders and the consensus we have heard is that there is a great need for an STS program offered by a Christian institution such as City Vision. The following are some of the individuals who have provided feedback as a part of our curriculum review committee/advisory board. Each individual on this list has committed to review the degree program and provide feedback. We have tried to get a strong representation in three key areas: 1) Representatives of Christian organizations with strong technology needs that might hire our graduates or send students; 2) Academics in Related Fields at both Secular and Christian Peer Institutions; 3) Christian technology professionals. While these individuals did not directly develop course materials they are providing significant expertise that is helping to shape the program.

|  |  |
| --- | --- |
| Daniel Hastings | MIT Dean of Students  Former Director, Technology and Policy Program, MIT  Professor of Engineering Systems and Aeronautics and Astronautics, MIT |
| Steve Nelson | Harvard Business School, Former Executive Director HBS, Former Director of HBS Social Entrepreneurship Program |
| Dick K. P. Yue | Founder, MIT Open Courseware  Professor, Director of International Programs, Former Associate Dean of Engineering, MIT |
| Brad Smith | President, Bakke University |
| Richard Morris | Director, Learning Technologies Missionary Aviation Fellowship |
| Rich Bonham | Executive Director, Greater Europe Mission |
| Dave Hackett | Associate Director, VisionSynergy |
| Tom Nurkkala | Associate Professor, Taylor University |
| John Dyer | Director of Web Development, Dallas Theological Seminary |
| Jon Hirst | President and CEO, Global Mapping International |
| Justin Long | Team Mobilization and Information Specialist, Mission to Unreached Peoples |
| Ron Hannaford | Director of Distance Learning, Biola |
| Greg/Dorenda Beeley | Lightsys |
| Tony Whittaker | Founder, Internet Evangelism Day  Web Advocate, SOON Ministries |
| Robert Fortner | Professor, American University, Bulgaria, Hope College |
| Pat Bailey | Associate Professor, Calvin College |
| Walker Tzeng | Chief Operating Officer, Olivet University |
| Heidi Campbell | Associate Professor, Texas A&M |
| David Bourgeois | Associate Professor, Biola University |
| Dan Henrich | Senior Consultant, Communication Resources International |
| Sas Conradie | Global Generosity Network |
| Drew Dickens | President/CEO, Need Him Ministries |

Information on Proctored Examinations

Currently all coursework is in the form of written papers and discussion forums, so no proctored examinations are needed. If we develop courses in the future that require proctored examinations, we will follow the same process that we have used with our undergraduate courses to meet all DETC requirements on proctoring.

Grading Criteria:

Each course has weekly written forum and papers. Written papers are graded based on the program grading rubric (attachment listed in the Grading Rubric Subfolder of this proposal). Forums are graded based on the rubric listed below. We use the following grading scale.

Grading Scale:

A 95-100%

A- 90%-94.99

B+ 87%-89.99

B 84%-86.99

B- 80%-83.99

C+ 77%-79.99

C 74%-76.99

C- 70%-73.99

D+ 67%-69.99

D 64%-66.99

D- 60%-63.99

F < 59.99%

**Project Rubric**

All of our major projects use a standard program rubric which is provided as an attachment in the rubric subfolder of this proposal.

**Forum Expectations**

We expect that students will spend 1 to 2 hours to post one initial message, one hour to read posts from 5+ students (presumes that a student doesn't read every post), and 60 minutes to post two reply messages. Forum grading will be based on the following items:

* Forum posts should be 150-250 words.
* Students must demonstrate comprehension of the material and achievement of the related learning objectives related to that forum.
* Students should demonstrate critical thinking and use outside material researched beyond the assigned readings.
* The goal of course forums is to have scholarly dialog among peers combining both the strengths of in-person class discussion and providing concise, professional quality writing (similar to a well thought-out academic or scholarly blog) and responding in a way that adds value to others writings
* For further reading on quality forum posts, see MTM dialogue guidelines online.

The following is a grading rubric for forum interactions.

|  |  |  |  |
| --- | --- | --- | --- |
| Evaluation Criteria | Advanced | Proficient | Poor |
| Development of Ideas and Knowledge Mastery | Well-developed ideas and demonstrated mastery of course materials; introduces new ideas; stimulates discussion (6 pts) | Developing ideas and some demonstrated knowledge; sometimes stimulates discussion (4 pts) | Poorly developed ideas and knowledge mastery which do not add to discussion (1 pt) |
| Evidence of Critical Thinking | Clear evidence of critical thinking application, analysis, synthesis and evaluation. Postings are characterized by clarity of argument, depth of insight into theoretical issues, originality of treatment, and relevance. Sometimes include unusual insights. Arguments are well supported. (6 pts) | Beginnings of critical thinking; postings tend to address peripheral issues. Generally accurate, but could be improved with more analysis and creative thought. Tendency to recite facts rather than address issues. (4 pts) | Poorly developed critical thinking (1 pt) |
| Response to Other Students and Instructor | Interacts at least twice with other students and/or instructor (4 pts) | Interacts at least once with other students and/or instructor (2 pts) | Does not interact at least once with other students and/or instructor. (0 pts) |
| Communication, Timeliness and Mechanics | Individual message and at least two responses posted before deadline. Standard English mechanics and grammar were used in the initial post. (4 pts) | Noticeable problems with mechanics or late postings. (2 pts) | Does not meet expectations with communication, mechanics or timeliness (0 pts) |

Capstone Project (6 or 9 Credits): The Capstone project represents the culmination of the student experience in the Technology and Ministry program. The Capstone project should show an integrated interdisciplinary understanding of the overall Technology and Ministry program. The capstone project should represent a practical work that could be useful to an organization, business or the general public that will improve your employability and marketability. The capstone project

The Capstone Project Design Course is the first step in the capstone project. This 1-credit course is designed to introduce the student to the requirements of the Capstone course proposal. A major focus of the course will be to choose and refine their Capstone project based on feedback from faculty, peers and partner organizations. For the overall Capstone course, students may select to do either a 5-credit or 8-credit capstone project course. Students planning to take this as a 5 credit course, should expect to spend at least 225 hours working on this project including reading, writing and other aspects of the project. Students taking an 8 credit course should expect to spend at least 360 hours.

Information on the capstone project is provided in detail in the attached courses (MTM 507. Capstone Project Design and MTM 508Technology and Ministry Capstone Project)

Outcomes Assessments: City Vision College uses end-of-course student surveys, tracks student completion rates, and tracks the employment statistics for its graduates according to DETC Policy C.14.

Library Resources: We maintain an online library of over 150,000 items at [www.cityvision.edu/wiki](http://www.cityvision.edu/wiki) and [www.urbanministry.org/wiki](http://www.urbanministry.org/wiki). Additionally, students may use the Internet, the public and university libraries where students reside.

Alignment with Comparable STS Master’s Programs

As a field, STS has a core of subjects that are a part of most Master’s programs. Because STS is an interdisciplinary field, there can often be some variance to the titles of these courses. Below is a list of the subject areas and our related course titles. We have provided a mapping of our courses to 5 other comparable Master’s programs in a following page, and have provided the details of those programs in the Appendix.

|  |  |
| --- | --- |
| **Subject** | **City Vision MTM Course Titles** |
| Introduction, Philosophical Survey of STS | Theology of Technology  Theology of Work |
| History of Technology and/or Science | History of Technology in the Church |
| Systems and Complexity | Organizational Systems |
| Emerging Technology, Innovation, Business & Contemporary Issues | High Tech Social Entrepreneurship |
| Information Technology | Emerging Media Ministry |
| Appropriate Technology / Technology in Global Development | Appropriate Technology |
| Technology, Media, Culture & Social Sciences | Technology & Addiction |

### MTM 510 History and Case Studies of Technology in the Church (Developed by Andrew Sears)



**School of Technology and Ministry**

**Mission Statement**

To educate and equip others to spread the gospel of Jesus Christ and to meet human needs in His name through technology in both lay and professional ministry contexts.

Instructor: Andrew Sears

Email: andrew@techmission.org

Phone: 617-282-9798

**Course Description**

This is an applied history course that will examine the history and case studies of how technology has been used in the church with a particular focus on practical applications. This course will primarily cover technology in church history after the age of the New Testament Apostles.

**MTM Program Outcomes**

At the conclusion of their MTM program, the student will able to:

1. Develop effective technology initiatives in a way that takes into account the unique cultures they will be serving and how to use technology to serve the poor.
2. Understand the Biblical basis, theology and historical context of technology and how to apply that in professional and ministry settings.
3. Understand the Christian vocation of Science, Technology, Engineering and Math careers and their unique identity and role within their field in a way that maximizes their calling and enables Christian ministry 24/7.
4. Understand complex systems in a way that helps them to effectively lead others and apply technology in ministry and professional environments.
5. Understand some of the limits of technology and how to counter some of the negative implications of technology and its effect on relationships and creation of new addictions.
6. Develop effective technology ministry strategies for developing sustainable initiatives by monitoring and understanding the latest theories, trends, tools and opportunities in technology in ministry.

MTM 503 helps students learn the history of technology in the church in order to meet program outcome 2 above.

**Course Objectives**

1. Understand the big picture trends from historical examples and case studies of how technology that has helped spread the gospel and promote ministry.
2. Evaluate the strategies of technology ministries from their history and case studies to create an effective strategy to create and grow a technology ministry.
3. Evaluate and critique how technology has influenced history to be able to develop strategies for how Christians can effectively respond.
4. Summarize the big picture and historical arc of how God has used technology in building the Kingdom of God and relate that to their own calling in technology and ministry.

**Required Reading**

* Reapsome, Jim and Hirst, Jon. *Innovation in mission : insights into practical innovations creating kingdom impact*. Tyrone, GA: Authentic Pub, 2007. ISBN 978-1932805765 .
* Hanks, Geoffrey. *60 great founders*. Fearn: Christian Focus, 1995. ISBN 978-1857921403.
* Toffler, Alvin. *The third wave*. New York: Bantam Books, 1984. ISBN: 978-0553246988
* Liardon, Roberts. *God's generals II: the roaring reformers*. New Kensington, PA: Whitaker House, 2003. ISBN: 0883689456
* Miller, M. Rex. *The Millennium Matrix: Reclaiming the Past, Reframing the Future of the Church*. 1st ed. Jossey-Bass, 2004. 304 pages. ISBN 0787962678.

**Recommended Texts**

* Dyer, John. *From the garden to the city: the redeeming and corrupting power of technology.* Grand Rapids, MI: Kregel Publications, 2011. ISBN: 978-0825426681
* Hipps, Shane. *The Hidden Power of Electronic Culture: How Media Shapes Faith, the Gospel, and Church*. Zondervan/Youth Specialties, 2006.

**Course Outline**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Period** | **Assessments** | **Due**  **Date** | **Est hrs** | **Weight** | **Objective #’s** |
| **1 Weeks 1-2** | **Communications Technology (Pre-1900)**  Read |  | 15 | -- | 1, 3 |
|  | Listen/View |  | 3 | -- |  |
|  | Forum #1a. Ministry Interest |  | 3 | 4% |  |
|  | Forum #1b. Technology and the Church Throughout the Centuries |  | 3 | 4% |  |
|  | Forum #1c. Technology and Martin Luther |  | 3 | 4% |  |
| **2 Weeks 3-4** | **Transportation, Medical Missions & Education Technologies**  Read |  | 12 | -- | 1, 2, 3 |
|  | Listen/View |  | 3 |  |  |
|  | Forum #2a. Technology, Church/State & Secularization |  | 3 | 4% |  |
|  | Forum #2b. Wiki Article |  | 3 | 4% |  |
|  | Minor Project #1. Case Study/Applied History Research |  | 15 | 12% |  |
| **3**  **Weeks 5-6** | **Communications Technology (1900-Present)**  Read |  | 12 | -- | 2, 3, 4 |
|  | Listen/View |  | 3 | -- |  |
|  | Forum #3a. Case Study Strategy |  | 3 | 4% |  |
|  | Forum #3b. Applied History Discussion |  | 3 | 4% |  |
|  | Minor Project #2. Personal Reflection “For Such a Time as This.” |  | 12 | 20% |  |
| **4 Weeks 7-8** | **Applied History in Today’s Technology and Ministry Context**  Read |  | 10 | -- | 3, 4 |
|  | Listen/View |  | 3 | -- |  |
|  | Forum #4a. Technology’s Influence on History |  | 3 | 4% |  |
|  | Forum #4b. Forecasting Positive/Negatives of Current Tech |  | 3 | 4% |  |
|  | Major Project #1. Applied History Consulting Research Report. |  | 20 | 32% |  |
| Overall | Total estimated hours based upon 17 hours per week for 8 weeks |  | 135 | 100% |  |

**Estimated Activities and Times**

* Reading is measured at reading 25 textbook pages per hour and reading 20 journal pages per hour Total reading for this course is 60 hours.
* Listening to recorded audio/video elements or live sessions (in-class equivalent) - 12.00 hours
* Discussion (in-class equivalent) - 24 hours
* Quizzes (in-class equivalent) - 2.00 hours
* Written projects - 37.00 hours

**MTM 510: History of Technology in the Church Course Content**

#### PERIOD 1. Communications Technology (Pre-1900)

**Read.**

* Chapter 5-7, Glut, pp 78-137.
* Chapters 1 & 2. *The Millennium Matrix. pp 19-53.*
* God’s Generals II (pp. 15-192): John Wycliffe, John Hus, Martin Luther
* 60 Great Founders: Bible Society, Christian Herald, Christian Literature Crusade, Gideons International, Scripture Gift Mission International, Scripture Union, Wycliffe Bible Translators
* Schultze, Quentin. *Gutenberg, God, and the Devil’s Plug-In: Lessons About Digital Publishing from the Famous Printer’s Failed Killer App*. Edenridge Press LLC, 2012.
* Vulgate and King James. Geoffrey, Hanks. *Great Events In The Story Of The Church*. Christian Focus, 2004.
* Harvey, Carlton F. [Technology and the Church Through the Centuries.](http://nazarene.org/files/docs/TechnologyChurchThroughCenturies.pdf) 25th Annual Conference Association of Nazarene Sociologists and Researchers. March 17, 2006.

**Listen/View.**

Google Hangout: The 3 C’s of Communications: Content, Conduit, Computing

*Big Thinkers - Alvin Toffler [Futurist]*, 2011. <http://www.youtube.com/watch?v=QCXCDYj6U4E>

Forum 1a. For this class you will need to identify a ministry interest. If you work for or volunteer with a church or Christian organization, then this could be that specific organization or a particular ministry of that organization. If you work in a secular job, you could select an example organization as your “dream ministry” to work for or a specific entrepreneurial ministry opportunity. You will use this example ministry for the assignments below, so please select one that could fit with these assignments. In a forum post, please explain your ministry interest and what you hope to learn from history and case studies in the church? Using your example ministry, explain how its functions can be broken down into the 3 C’s of communications. Which is its greatest strength and what are some examples of organizations (historical or current) with similar strengths that you can learn from?

Forum 1b. Discuss the three questions posed in Technology and the Church Through the Centuries?

Forum 1c. Discuss why the printing press helped Martin Luther become more successful in his reformation than John Wycliffe and John Hus? What are modern parallels?

#### PERIOD 2. Transportation, Medical Missions and Education Technologies

**Listen/View:**

Google Hangout. Technology in Transportation, Medicine and Education

Diaspora Missiology: <http://www.ustream.tv/recorded/6897559>   
Google Hangout: Christian Community Technology

**Read**

The Third Wave: Chapters 1-10. pp. 1-125

Transportation

60 Great Founders: Mission Aviation Fellowship

Innovation in Missions: Chapter 4. Innovation in Short Term Missions

Circuit Riders: <http://en.wikipedia.org/wiki/Circuit_rider_(religious)> , <http://www.forgottenword.org/circuitriders.html>

Diaspora Missiology:

<http://www.enochwan.com/english/articles/pdf/Diaspora%20Missiology.pdf>

Medical Missions

60 Great Founders: Bethnal Green Medical Mission, John Grooms Association for Disabled People, Mildmay Mission Hospital, The Red Cross Movement, Royal Association in Aid of Deaf People, Royal Hospital for Neuro-Disability, Royal National Institute for the Blind,

Christian Community Health <http://www.cchf.org/sites/344/uploaded/files/History_of_a_Movement.ppt>

Education

“Medieval University.” *Wikipedia, the Free Encyclopedia*, <http://en.wikipedia.org/wiki/Medieval_university>

“Sunday School.” *Wikipedia, the Free Encyclopedia*, <http://en.wikipedia.org/wiki/Sunday_school>

60 Great Founders: The Sunday School Movement

Introduction. Ringenberg, William C. *Christian College, The: A History of Protestant Higher Education in America*. 2nd ed. Baker Academic, 2006.

Forum #2a. Technology, Church/State and Secularization. There are some areas where Christian organizations have remained a fairly dominant portion of the overall sector (like serving the homeless and global relief), whereas other segments like education and transportation, Christian institutions have been marginalized. Discuss what you believe to be the driving technological, economic and historical forces that determine whether Christian organizations will play a major role in a particular sector? When is it more appropriate for other Government, Business or Secular Nonprofits to be dominant rather that Faith-Based Organizations?

Forum #2b. Wiki Article. Use the material from your reading and other sources to contribute significant content to at least two articles organizations or topics related to technology in church history on City Vision’s Wiki. You can use material from the paper you are writing for your minor project below. Use your article to add content to either an existing article on Wikipedia or create new articles (and reference your article on City Vision’s wiki). Post documentation and links of your additions both to City Vision’s wiki and Wikipedia to this forum. You may use your research on your minor project #1 below for this article. The difference is that Minor Project #1 will be longer and will be a private paper only viewable to this class, while the Wiki article will be a public presentation of your research.

Minor Project #1. Case Study/Applied History Research. Identify an organization in technology and ministry that you think would be relevant for you to learn from based on your example ministry. Write a paper detailing the history of that organization. You can model your history on some of the examples from the readings in this class. Students are encouraged to use any material available including contacting the organization itself, but provide appropriate references to all material.

#### PERIOD 3. Communications Technology (1900-present)

**Read:**

Innovation in Missions: Chapter 5-7

60 Great Founders: SIM International, Trans World Radio

Chapters 3 & 4. *The Millennium Matrix*

Christian Broadcasting Network Case Study

“Religious Broadcasting.” *Wikipedia, the Free Encyclopedia*: <http://en.wikipedia.org/wiki/Religious_broadcasting>

“Christian Broadcast Network.” *Wikipedia, the Free Encyclopedia*: <http://en.wikipedia.org/wiki/Christian_Broadcasting_Network>

<http://www.cbn.com/about/>

The Jesus Film Case Study

“Jesus (1979\_film).” *Wikipedia, the Free Encyclopedia*: <http://en.wikipedia.org/wiki/Jesus_(1979_film)> and <http://www.jesusfilm.org/aboutus/history>

Invisible Children Case Study

“Kony 2012.” *Wikipedia, the Free Encyclopedia*: <http://en.wikipedia.org/wiki/Kony_2012> and

Kron, Josh. “Mission From God: The Upstart Christian Sect Driving Invisible Children and Changing Africa.” *The Atlantic*, April 10, 2012. <http://www.theatlantic.com/international/archive/2012/04/mission-from-god-the-upstart-christian-sect-driving-invisible-children-and-changing-africa/255626/>

Susan F. Sieloff, Robert Young, Raymond M. Kinnunen. TechMission: Jesus Justice and Technology. North American Case Research Association (NACRA). 19 pages. Publication date: Mar 15, 2010

Current Translation Efforts. <http://www.wycliffe.org/about/statistics.aspx> and

Naomi Frizzell, THE 70%: ORALITY AND THE MISSION OF THE CHURCH, 02 April 2012 <http://www.lausanne.org/en/blog/1779-the-70-orality-and-the-mission-of-the-church.html>

**Listen/View.**

Google Hangout Guest Speaker

Forum #3a. Pick one of the case studies listed in Period 3. What would you recommend for that organization for some of their next steps in their strategy?

Forum #3b. Applied History Discussion. Discuss some lessons that you learned from these historical examples and case studies (from any section in this course) and develop ideas of how those lessons could be applied to your example ministry?

Minor Project #2. Personal Reflection “For Such a Time as This.” Today due to technology we live more richly that any king hundreds of years ago, and in many ways our situation is similar to Esther when God told her “For if you remain silent at this time, relief and deliverance for the Jews will arise from another place, but you and your father’s family will perish. And who knows but that you have come to your royal position for such a time as this?” Based on the assumption that God makes all of us “for such a time as this,” how do you think that God has prepared you and your ministry to meet the unique needs for part of the world “for such a time as this”?

#### PERIOD 4. Applied History in Today’s Technology and Ministry Context

**Read:**

[Do Machines Make History? Robert L. Heilbroner](http://lawmeme.law.yale.edu/files/folders/135/download.aspx). Technology and Culture, Vol. 8, No. 3. (Jul., 1967), pp. 335-345.

[Governing the Internet & Grasping its Potential](http://www.lausanne.org/docs/LGA/Lausanne-Global-Analysis-2012-11.pdf), Tom Harvey. November, 2012. Vol. 1, No. 1. Lausanne Global Analysis.

Chapters 5-7. *The Millennium Matrix*

**Listen/View:**

Google Hangout Guest Speaker

Forum #4a. Technology’s Influence on History. Provide your analysis on how God, people and technology work together to drive history. Specifically look at recent historical examples the growth of Christianity in China and former communist countries, the Arab Spring and North Korea.

Forum 4b. Learning from the history of the positives and the negatives that the “second wave” technologies brought, what do you anticipate that the positive and negative aspects of “third wave” technologies such as the Internet are bringing? How should Christians respond?

Major Project #1. **Applied History Consulting Research Report.** Imagine that the organization from your ministry interest has hired you to write a research paper on lessons from history and other organizational case studies that it could learn from to inform its strategy. Write a major research paper 15-20 pages as if you were submitting it to the head of the organization as a consultant research report. You may use elements of your other assignments to contribute material toward this project. In your paper answer the following questions:

1. How is our current place in history and technology drivers creating unique opportunities and needs for the organization/ministry?

2. What are case studies and examples from history that you can learn from? Conduct research and provide details that could be helpful.

3. Apply both the big picture of where we are in history and these historical examples to provide recommendations on strategy for the organization.

### 3. MTM 503 Theology of Work (Developed by Andrew Sears)



**MTM 503**

**Theology of Work and Personal Calling**

**School of Science, Technology, Society and Ministry**

**Mission Statement**

To educate and equip others to spread the gospel of Jesus Christ and to meet human needs in His name through technology in both lay and professional ministry contexts.

Instructor: Fletcher Tink

Email: fletcht@aol.com

Phone: 816-268-5496 (o); 816-805-4115 (c)

**Course Description**

This course will help students to understand and practice a “theology of work” out of the underpinnings and specific passages in Scripture, especially those related to the STEM professions. It will help correct theological misunderstandings pertaining to the role of lay Christianity and the importance of “vocation” in the STEM professions.

**MTM Program Outcomes**

At the conclusion of their MTM program, the student will able to:

1. Develop effective technology initiatives in a way that takes into account the unique cultures they will be serving and how to use technology to serve the poor.
2. Understand the Biblical basis, theology and historical context of technology and how to apply that in professional and ministry settings.
3. Understand the Christian vocation of Science, Technology, Engineering and Math careers and their unique identity and role within their field in a way that maximizes their calling and enables Christian ministry 24/7.
4. Understand complex systems in a way that helps them to effectively lead others and apply technology in ministry and professional environments.
5. Understand some of the limits of technology and how to counter some of the negative implications of technology and its effect on relationships and creation of new addictions.
6. Develop effective technology ministry strategies for developing sustainable initiatives by monitoring and understanding the latest theories, trends, tools and opportunities in technology in ministry.

MTM 510 helps students understand their own Christian vocation in a STEM career to help meet program objective 3.

**Course Objectives**

1. Understand a Theology of Work and apply that toward their own life and calling.
2. Understand their unique identity as a technologist and the unique role played by technologists in the Body of Christ.
3. Identify what their calling or vocation might be and how it might be leveraged for ministry
4. Understand the unique issues facing Christians in technological and entrepreneurial fields and how to manage their career in the current marketplace.
5. Create a synthesis of the above understandings into a reflective life plan.

**Required Reading**

* Hoffman, R., & Casnocha, B. (2012). ***The Start-up of You: Adapt to the Future, Invest in Yourself, and Transform Your Career.*** New York: Crown Business. 272 pages. ISBN: 9780307888907
* Rath, T. (2007). ***StrengthsFinder 2.0*** (1 edition.). New York: Gallup Press. 183 pages ISBN: 9781595620156 Note: you must purchase a new book as only new books come with the code to complete the StrengthsFinder test. If you have already completed the Strength Finder Inventory, then you do not need to complete it again.
* Rees, E., & Warren, R. (2008). ***S.H.A.P.E.: Finding and Fulfilling Your Unique Purpose for Life.*** Grand Rapids, Mich.: Zondervan. 256 pages. ISBN: 9780310292487
* Stevens, R Paul. ***The Other Six Days: Vocation Work and Ministry in Biblical Perspective.*** Wm B Eerdmans. 2000. 289 pages. ISBN #978-080284800

Optional

* Tieger, P. D. (2014). ***Do What You Are: Discover the Perfect Career for You Through the Secrets of Personality Type*** (5 edition.). New York: Little, Brown and Company.

Course Materials

**Session One; Week One**

1:1 To Prepare: Ungraded:

A.. Select and possess your four chosen textbooks from those indicated above. You may use an alternative text that is listed either above or on the supplementary bibliography or a textbook that is approved by the professor.

B. Check out your course equipment, i.e. computer and internet access to determine if any bugs or technological issues will impede your successful completion of the course. If you believe that there are some issues involved, contact the City Vision IT department.

C. Read the welcoming message from professor and scan the list of names of those who are your fellow students.

D. Send a chat message to your fellow students introducing yourself, your interest in this topic and some encouragement.

1:2 To Read: Will be graded in the self-report later

A. Read one third of *The Other Six Days*.

1:4 To Watch: Will be graded in the self-report later

A. Watch Dr Fletcher Tink’s “Introduction to the Course” and take notes on points to highlight

B. Watch the first two lectures on Theology of Work

1:5 To Do: Will be graded by the professor. This will be done in two parts. Each part is valued at

10 points

A. Write a forum post on how you have integrated or not integrated your personal faith

with the occupation you hold now, have held, or intend to hold.

B. In the forum, respond to the following question: “I find meaning in my current assignment in the following ways:” and “If there were no sin in the world, my job (occupation, vocation) would look like . . . . “

B. Final Project Assignment. Read the final project assignment and download and review the template.

1:7 To Remember: Will be graded by the professor. 10 points

A. Please indicate clearly, what of the above assignments you have completed, and what has

left undone. 5 points will be given for this report, and 5 for full completion of assignments.

**Session Two: Week Two**

2:1 To Prepare:

A. Examine your own “work”, thanking God for the opportunities and the responsibilities that it gives you to develop both yourself and your environment in ways that please God.

B. Get out a notebook in preparation for taking notes on what you read, listen to and watch

during the course of this session. Your notes will be helpful in the written assignments

and the forum along with thoughts that should linger long after this course.

2:2 To Read:

A. Read the second third of *The Other Six Days*.

2:3 To Watch:

1. Watch lectures 3 to 5 on Theology of Work

To Do:

1. In the forum, respond to the following statement: “My work potentially can influence the following systems in the following ways: . . . .”
2. In the forum, reflect on how the fall has affected your work personally and respond to the following statement: “I believe that I have failed in my work, in the following ways that have not given glory to God”

2:7 To Remember: Will be graded by the professor. 10 points

1. Please indicate clearly, what of the above assignments you have completed, and what has left undone. 5 points will be given for this report, and 5 for full completion of assignments.

**Session Three: Week Three**

3:1 To Prepare:

A. Examine your own “work”, thanking God for the opportunities and the responsibilities that it gives you to develop both yourself and your environment in ways that please God.

B. Get out a notebook in preparation for taking notes on what you read, listen to and watch

during the course of this session. Your notes will be helpful in the written assignments

and the forum along with thoughts that should linger long after this course.

3:2 To Read:

A. Read any supplemental materials that are suggested in the curriculum or in the lecture.

B. Finish *The Other Six Days*.

C. Read the Powerpoint presentation and listen to the accompanying lecture.

3:3 To Watch:

1. Watch lectures 6 to 8 on Theology of Work

3:4 To Do:

1. In the forum, respond to the following question: “Where have you faced a serious ethical problem that you were not sure that you handled wisely or in a Christian fashion?” Now, how would you handle it differently.
2. In the forum, I respond with at least 200 words to the following statement: “I believe that I can make a positive impact in the following ways in my job or vocation”.
3. Final Project Assignment: Write a Book Review for *The Other Six Days* following the instructions in the Final Project. You will submit this in the final week of the class with the final project.

2:7 To Remember: Will be graded by the professor. 10 points

1. Please indicate clearly, what of the above assignments you have completed, and what has left undone. 5 points will be given for this report, and 5 for full completion of assignments.

**Session Four: Week Four**

5:1 To Read

A. Read the full book, *S.H.A.P.E.*

5:2 To Watch: *S.H.A.P.E. Video*

1. Watch to the professor’s commentary on the Powerpoint presentation

5:3 To Do:

1. 80 points Complete the attached S.H.A.P.E. Profile template
2. Final Project Assignment: Write a Book Review for *S.H.A.P.E.* following the instructions in the Final Project. You will submit this in the final week of the class with the final project.

**Session Five: Week Five**

3:2 To Read:

1. Read the beginning of *Strength Finder 2.0* and the Sections related to your strengths after taking the test with the code you get from the book (see To Do below)
2. After taking the Myers-Briggs test, read the chapter of Do What You Are related to Myers Briggs.

3:5 To Do: Will be graded by the professor. A total of 50 points

1. Complete the StrengthFinders online test using your access code that came with your book at: <http://strengths.gallup.com/111244/How-Use-Your-StrengthsFinder-Access-Code.aspx> If you have already completed the Strength Finder Inventory before, then you do not need to complete it again. You assignment is to re-read through your results.
2. Complete a Myers Briggs test. If you have already completed the Myers Briggs test, you do not need to do it again. Be sure note how strong you are on each of the dimensions and if there are any where you are more in the middle.

Use: <http://www.humanmetrics.com/cgi-win/jtypes2.asp>

1. Write a forum post listing your Strengthsfinder and Myers-Briggs results and reflect on what you learned from reading the profile of your strengths and the Do What You Are profile from Myers Briggs.

3:6 To Reflect: Will be graded by the professor. 50 points

**Session Six: Week Six**

6:1 To Read

A. Read the *The Startup of You*

6:2 To Watch

1. The Startup of You <https://www.youtube.com/watch?v=e2X54ALRkZg>

6:3 To Do: These will be graded by the professor. A total of 80 points

A. Forum (40 points) Conduct a SWOT analysis on yourself as if you were a startup company using the attached template. You can find instructions on how to conduct SWOT analysis at: <http://www.mindtools.com/pages/article/newTMC_05.htm> <http://ctb.ku.edu/en/tablecontents/sub_section_main_1049.aspx> <http://en.wikipedia.org/wiki/SWOT_analysis>

B. Forum (40 points) Update your LinkedIn profile based on the principles of the Startup of You to present as strong a picture as possible of your background, skills, education and other items to demonstrate your expertise and credibility. Post a link to your LinkedIn profile. Review two of your classmates LinkedIn profile. Comment on two other classmates to identify what you see as their strengths and opportunities.

**Session Seven: Week Seven**

1. Final Project Assignment: Write a Book Review for *The Startup Of You* following the instructions in the Final Project. You will submit this in the final week of the class with the final project.

7:1 To Watch: Watch the presentation of Frances Collins, the “brain” behind the human genome project. It can be found at <https://www.youtube.com/watch?v=EGu_VtbpWhE>

1. Watch carefully the DVD presentation of Dr Kwon as he uses technology especially in empowering people in the shanty towns around.
2. Patrick Gelsinger, CEO of VMWare, <https://www.youtube.com/watch?v=fKg7KLFEYiE>
3. Watch an interview of Dr Ben Carson, found at <http://www.youtube.com/watch?v=4-8NRSfl_a8>. He is the head brain surgeon as Johns Hopkins University Medical School and a person of profound faith.

7:2 To Do: Graded by the professor. It is valued at 50 points.

A. Write up the three most significant lessons you have learned from the materials of this week. One should come from the readings; one from the materials watched; and one from the Powerpoint and accompanying lecture. The total assignment should be no less than 500 words. This will be valued at 30 points.

B. Work on your final project.

**Session Eight: Week Eight**

Final Project

Your final project is intended to be a synthesis of this course. It should be a more polished and cohesive synthesis of your previous assignments as well as including the following elements.

* Your personal theology of work as it applies to you personally in a tech field. How do you think God views your field and profession and is using it for His purposes?
* Your story. In particular, try to identify themes from painful life experiences, patterns of success and personal passions in your story that will help you better understand your calling.
* What you learned about who you are based on your personality type, Strengthsfinder strengths, SHAPE, other personality profile tools you have completed and other factors. How do you think that shapes your personal vocation and calling?
* The core of the document should be to write your own personal business plan of the Startup of You including the following elements:
  + Market research on people who are doing the type of work you want to do that might want to emulate. How did they get there? What is a plan for you follow a similar path?
  + Market research on your sector. What is the size of the market? How competitive is that market? What will be your competitive advantage in that market?
  + Networking plan: who are the people you need to meet and talk with to take the next steps in your calling? How can you find groups and mentors in the different areas you need to grow?
  + Write down where you want to be in your calling in 5 or 10 years. Write out a detailed plan of the steps of how you can get there.

Use The Final Project Template

<http://www.cityvision.edu/courses/mod/url/view.php?id=34367>

**Estimated Activities and Times**

* Reading is measured at reading 25 textbook pages per hour and reading 20 journal pages per hour Total reading for this course is 60 hours.
* Listening to recorded audio/video elements or live sessions (in-class equivalent) - 12.00 hours
* Discussion (in-class equivalent) - 24 hours
* Written projects - 39.00 hours

**Forum Expectations**

For our Master's program, we expect that students will spend an estimated one-two hours to post one initial message, one hour to read posts from 5+ students (presumes that a student doesn't read every post), and an estimated 1 hour to post two reply messages. Forum grading will be based on the following items:

* Forum posts should be 400-600 words although these are not strict limits.
* Students must demonstrate comprehension of the material and achievement of the related learning objectives related to that forum. Be sure to read the the learning objectives.
* Students should demonstrate critical thinking and use outside material researched beyond the assigned readings.
* The goal of course forums is to have scholarly dialog among peers combining both the strengths of in-person class discussion and providing concise, professional quality writing (similar to a well thought-out academic or scholarly blog) and responding in a way that adds value to others writings
* Students are not required to use APA format for references in forum posts, but instead students are encouraged to hyperlink relevant information when possible.
* Grading rubric: forums use the same high level grading rubric as for the final project including
  + Content Knowledge (25%)
  + Critical Thinking (25%). Note that critical thinking is very different from criticism.
  + Communication (15%)
  + Application (35%)

### MTM 505: Technology, Innovation, Cross-Cultural Organizations and the Poor (Developed by Andrew Sears)

#### Technology, Innovation, Cross-Cultural Organizations and the Poor Syllabus



**MTM 505**

**Technology, Innovation, Cross-Cultural Organizations and the Poor**

**Master’s of Technology and Ministry**

**Mission Statement**

To educate and equip others to spread the gospel of Jesus Christ and to meet human needs in His name through technology in both lay and professional ministry contexts.

Instructor: Andrew Sears

Email: andrew@techmission.org

Phone: 617-282-9798 x101

**Course Description**

This course is an introduction to Technology, Innovation, Cross-Cultural Organizations and the Poor. This course will look at technology approaches and strategies for serving these groups that have been called "the majority world," "the two-thirds world," "the other 90%," "the base/bottom of the pyramid" and "the poor." This course will examine principles of appropriate technology and case studies that will help businesses and ministries develop products and strategies for these groups.

**MTM Program Outcomes**

At the conclusion of their MTM program, the student will able to:

1. **Develop effective technology initiatives in a way that takes into account the unique cultures they will be serving and how to use technology to serve the poor.**
2. Understand the Biblical basis, theology and historical context of technology and how to apply that in professional and ministry settings.
3. Understand the Christian vocation of Science, Technology, Engineering and Math careers and their unique identity and role within their field in a way that maximizes their calling and enables Christian ministry 24/7.
4. Understand complex systems in a way that helps them to effectively lead others and apply technology in ministry and professional environments.
5. Understand some of the limits of technology and how to counter some of the negative implications of technology and its effect on relationships and creation of new addictions.
6. Develop effective technology ministry strategies for developing sustainable initiatives by monitoring and understanding the latest theories, trends, tools and opportunities in technology in ministry

MTM 505 helps students understand effective strategies and foundations in using technology in serving the non-Western world in order to meet program outcomes 1 and 2 above.

**Course Objectives**

1. Understand low-cost business models and common strategies applied by businesses serving the Base of the Pyramid and poor communities and apply those into organizational strategy.
2. Analyze the cultural and power implications of key trends such as social/peer production, the long tail, mobile and online education that have major implications for the poor and to create organizational strategies to respond to these trends.
3. Apply principles of cross-cultural ministry in developing organizational strategies and new product designs.
4. Understand the digital divide, knowledge divide to be able to develop strategies for Christian organizations to effectively respond.
5. Analyze case studies of organizations and business strategies that were successful in serving the poor and apply that toward organizational strategy.

**Required Texts (pick 3)**

Benkler, Yochai. [*The Wealth of Networks: How Social Production Transforms Markets and Freedom*](http://www.benkler.org/Benkler_Wealth_Of_Networks.pdf). (available free online) Yale University Press, 2007. 528 pages. ISBN: 0300125771

Brynjolfsson, E., & McAfee, A. (2011). *Race Against The Machine: How the Digital Revolution is Accelerating Innovation, Driving Productivity, and Irreversibly Transforming Employment and the Economy*. Digital Frontier Press. 98 pages. ISBN: 0984725113

Cowen, T. (2013). *Average is over: powering America beyond the age of the great stagnation*. New York, New York: Dutton. 290 p.

Ford, M. (2009). *The Lights in the Tunnel: Automation, Accelerating Technology and the Economy of the Future*. Acculant Publishing. 262 p.

Prahalad, C. K. (2009). *The Fortune at the Bottom of the Pyramid: Eradicating Poverty Through Profits, Revised and Updated 5th Anniversary Edition* (Revised.). Wharton School Publishing. 432 p.

**Course Outline**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Period** | **Assessments** | **Due** **Date** | **Est hrs** | **Weight** | **Objective #’s** |
| **1**  **Weeks 1-2** | **Technology and Low-Cost Business Models**  Read |  | 18 | -- | 1,2 |
|  | Listen/View. |  | 3 | -- |  |
|  | Forum #1a. Low-Cost Technology Strategy |  | 3 | 4% |  |
|  | Forum #1b. Final Project Proposal Draft |  | 3 | 4% |  |
| **2**  **Weeks 3-4** | **Culture and Design Parameters in Serving the Poor**  Read |  | 16 | - | 3 |
|  | Listen/View |  | 3 |  |  |
|  | Cross Cultural Role |  | 3 | 4% |  |
|  | Forum #1b. Final Project Proposal |  | 3 | 4% |  |
| **Weeks 5-6** | **Digital Divide, Knowledge Divide and the Christian Response**  Read |  | 6 | -- | 4 |
|  | Listen/View |  | 3 | -- |  |
|  | Brain Train & Technology Transfer |  | 3 | 4% |  |
|  | Diffusion of Innovation and the Poor |  | 3 | 4% |  |
| **Weeks 7-8** | **Case Studies**  Read |  | 10 | -- | 1, 2, 3, 4, 5 |
|  | Listen/View |  | 1 | -- |  |
|  | Final Project. |  | 30 | 0% |  |
| Overall | Total estimated hours based upon 17 hours per week for 8 weeks |  | 135 | 100% |  |

**Estimated Activities and Times**

* Reading is measured at reading 25 textbook pages per hour and reading 20 journal pages per hour Total reading for this course is 60 hours.
* Listening to recorded audio/video elements or live sessions (in-class equivalent) - 12.00 hours
* Discussion (in-class equivalent) - 24 hours
* Quizzes (in-class equivalent) - 2.00 hours
* Written projects - 37.00 hours

**Forum Expectations**

We expect that students will spend at least one-two hours to post one initial message, one hour to read posts from 5+ students (presumes that a student doesn't read every post), and 60 minutes to post two reply messages. Forum grading will be based on the following items:

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* Students are not required to use APA format for references in forum posts, but instead students are encouraged to hyperlink relevant information when possible.
* Grading rubric: forums use the same high level grading rubric as for the final project including
* Content Knowledge (25%)
* Critical Thinking (25%). Note that [critical thinking](http://en.wikipedia.org/wiki/Critical_thinking) is very different from criticism.
* Communication (15%)
* Application (35%)

**Final Project Instructions**

**Final Project Formatting**

The final project uses the final project template linked in the online course. Except for Class Forum posts, all written assignments should be double-spaced using 12-point font and 1-inch margins, and include a relevant heading (name, date, assignment title), and subheadings where appropriate, which can be viewed in a Navigation Pane. Please correct spelling and grammatical errors before submitting all assignments. Spelling, grammar, and writing style will be taken into consideration in evaluating written work. Assignments should be submitted to the Course Dropbox within Moodle. Every assignment should carry a filename that MUST include your name (Student Name) and the assignment number, e.g. Jan\_Smith\_Minor1.doc

Written work must be reflective, balanced, analysis and be well-supported by references. Deep familiarity with the biblical text will be appreciated as will the ability to showcase extensive theological reading and reflection and to critically examine an issue from many points of view.

Students should use APA format for references. It is recommended that students use a bibliography tool such as Endnote, Zotoro (free), Mendeley (free), etc.

**Chapter 1. Literature Review** (6-8 pages)

Write a review of the literature and media presented in this course. You should plan on approximately 8 double-spaced pages to review the materials. Your review should cover the following:

* What are the big ideas or takeaways from the material?
* How do you see those ideas being applied to 1) yourself and/or 2) your organization and/or 3) the Christian world in general?

**Chapter 2. Project** (20-25 pages)

Your boss has decided to develop a new business unit/program division that will be focused exclusively on using technology to serve the poor. He has asked you to use the knowledge you have gained this course to form the basis of a research project where you will develop a strategic plan for how your organization should approach using technology to serve the poor. If your organization already is focused on using technology to serve the poor, then apply the principles in this course toward developing a strategy for how your division or program can utilize these principles to better serve the poor.

Some specific sections that you might consider including are:

* Develop a strategy and plan to improve your own access and your organization’s access to knowledge and innovations.
* Develop a strategy and plan to improve your own ability and your organization’s ability to pass on knowledge and innovations to the poor and organizations serving the poor
* Identify models case studies of effective organizations and models of using technology to serve the poor. Conduct research on these organizations and include that research in your project as well as lessons that might be applied to your organizations. Example case studies might be computerized adult learning centers, youth programs using technology, corporate philanthropy, secular nonprofit tech initiatives, Christian tech initiatives, etc.

The end goal is to product a useful document for yourself and/or your organization related to information technology and the poor. Some example projects include:

* Adult Education Center or Youth Tech Program. Work with your instructor to identify a few of the top adult education centers or youth tech programs in ministries and interview them and collect resources on: 1) How their program works 2) What resources they use 3) Collect any documents they are willing to share curriculum, templates, presentations, grant proposals. Then take this material and develop a 1) Presentation proposal to senior management 2) A manual or plan you can use to improve the operations of your organization’s program.
* Technology & Missions Organization. Evaluate your organizations current strategy in working with the poor and the “majority world.” How can some of the principles in this course be applied? Then take this material and develop a 1) Presentation proposal to senior management 2) A manual or plan you can use to improve the operations of your organization’s program.
* Christian Technology Consulting Company. Identify models of corporate social responsibility of other agencies in a similar line of business. Develop a strategy and plan for your organization to more effectively serve the poor. Aspects you might want to consider are: discounts for certain types of organization, technologies appropriate for the poor, ways to reduce cost structure for serving the poor, how you will do technology transfer and training to improve the tech capabilities of the organizations you are working with, etc.

Note on alternative media formats. If you prefer to do some portion of your project in an alternative media format (Web, Powerpoint), then the page requirements should be such that they take the same amount of time as producing the content in a paper format.

**Chapter 3. Self-Evaluation, Reflection and Suggestions** (2-3 pages)

This section is to provide room for self-evaluation, reflection and suggestions including the following elements:

1. Reflects what you learned during this course and whether it met what you anticipated based on the course’s desired learning outcomes (goals or objectives), as well as your personal goals for the course.
2. We view all our whole program as an “open source” project where we are looking for students to contribute to make it better for the next group of students. What resources, materials or people would you suggest that might be able to contribute to this course? Any other suggestions for improvement?

**Course Materials**

**Weeks 1-2. Technology and Low Cost Business Models**

**Demographic Trends**

[Christianity in its Global Context, 1970–2020](http://wwwgordonconwell.com/netcommunity/CSGCResources/ChristianityinitsGlobalContext.pdf) (to page 19)

The Fortune at the Bottom of the Pyramid (see link)

**Technology Trends**

Economics of Open Source & Peer Production. <http://www.ted.com/talks/yochai_benkler_on_the_new_open_source_economics#t-69420>

Pick one (or more) of the following options:

* <http://www.youtube.com/watch?v=zF0k6dEm0zQ>
* [Don Tapscott: Four principles for the open world](http://www.ted.com/talks/don_tapscott_four_principles_for_the_open_world_1.html)

The Long Tail: Pick two (or more) of the following options

* <http://www.youtube.com/watch?v=x0h0FP6QWHA>
* <http://en.wikipedia.org/wiki/Long_tail>
* [Chris Anderson of WIRED on tech's Long Tail (article)](http://www.ted.com/talks/chris_anderson_of_wired_on_tech_s_long_tail.html)
* [Chris Anderson: How web video powers global innovation (TED Talk)](http://www.ted.com/talks/chris_anderson_how_web_video_powers_global_innovation.html)

Freemium Pricing and Zero Marginal Cost. Pick two (or more) of the following options:

* <https://www.youtube.com/watch?v=p8l64NpaCnE>
* <http://www.newyorker.com/arts/critics/books/2009/07/06/090706crbo_books_gladwell?currentPage=all>
* <http://www.huffingtonpost.com/jeremy-rifkin/internet-of-things_b_5104072.html> or [Jeremy Rifkin: "The Zero Marginal Cost Society"](http://www.youtube.com/watch?v=5-iDUcETjvo)

Discussion Forum

1. Reflect on the principles of the Bottom of the Pyramid, Long Tail, the Free Economy and Zero Marginal Cost and apply those principles to your organization’s or ministry’s strategy? Where are you already following some of these principles? What opportunities could they present to your organization? How could your organization dramatically reduce costs to serve a BoP market?
2. Read the final project assignment for this course. Write a one-page draft proposal of possible topics or an approach to take on your final project. It may be helpful to scan the material to be used and assignments in the remaining weeks for the course as they can be used to develop components of your final project.

**Weeks 3-4. Technology and Cross Cultural Ministry**

Learning Objectives

* Understand cross-cultural dimensions
* Understand the importance of using technology to either supporting indigenous leaders (if there are indigenous Christians) or supporting cross-cultural missions if there are not
* Be able to apply those understandings to develop an effective bridge-building strategy for using technology in cross-culturally
* Read:
* <http://legacy.joshuaproject.net/assets/articles/the-highest-priority.pdf>
* <http://en.wikipedia.org/wiki/Hofstede%27s_cultural_dimensions_theory>
* <https://www.youtube.com/watch?v=U-XdlbgFxZo>
* Pick One
  + Read Reconciliation Across Social Class (<http://www.cityvision.edu/courses/mod/url/view.php?id=33173>)
  + Watch Reconciliation Across Social Class
* Read Ethnic Identity Development for Christians

Assignment

1. Cross-cultural ministry is about functioning as bridge builders between different communities and at different parts of the bridge. Complete a table of where your own culture is relative to Hofsteade’s cultural dimensions and table the Reconciliation on Social Class. Use this table and your own knowledge of your class identity, ethnic identity and personality to reflect on your role as a bridge builder. What unique role as a bridge does your own cultural and class identity and who God made you to be provide for you in serving as a bridge builder? What are the primary communities where you function most effectively as a bridge between? To what extent are you supporting E0, E1, E2 or E3 ministry and should you shift your focus to be more effective? (1-2 pages)
2. Revise final project proposal based on feedback and reflection in previous week and resubmit as final draft proposal. (After submitting, begin work on final project.)

**Weeks 5-6. The Knowledge Divide**

Learning Objectives

* Understand how the knowledge divide, brain drain and innovation relate to injustice
* Understand strategies for addressing the knowledge divide

Week 1 Reading

<http://en.wikipedia.org/wiki/Knowledge_divide>

<http://en.wikipedia.org/wiki/Digital_divide>

<http://en.wikipedia.org/wiki/Brain_drain>

Christian Technology Leadership, Disruptive Innovation, Higher Education and the Poor

Week 2 Reading

Diffusion of Innovation Chapter 11: Consequences of Innovations

<http://en.wikipedia.org/wiki/Technology_transfer>

<http://en.wikipedia.org/wiki/Reverse_brain_drain>

Diaspora Networks and the International Migration of Skills URL

<https://www.youtube.com/watch?v=Oj8eFu72_fc>

Relocation PDF

Discussion Forum

1. As countries and organizations engage cross culturally with the rest of the world, it can result in an exploitive situation that primarily is represented by the problem of brain drain and resource drain, but in other cases the cross-cultural dynamics are a helpful part of the solution resulting in reverse brain drain, diaspora networks, technology transfer and remittances as a major part of the solution. In 1-2 pages, what are the factors that determine whether the relationship is exploitative or helpful and what can be done to move relationships more in the direction of being helpful?
2. In about 2 pages, create a diagram and summarize how you and your organization fits into a chain of innovation. What have been your primary sources of knowledge and innovation? What are the primary audiences where you are spreading knowledge and innovation? Write a strategy for intentionally improving the diffusion of knowledge/innovation to and from you and your organization. How can this strategy be intentional about diffusing knowledge and innovation to the poor and those serving the poor? How can you and your organization both stretch yourselves to help the poor, but also maintain balance and sustainability when addressing these issues?

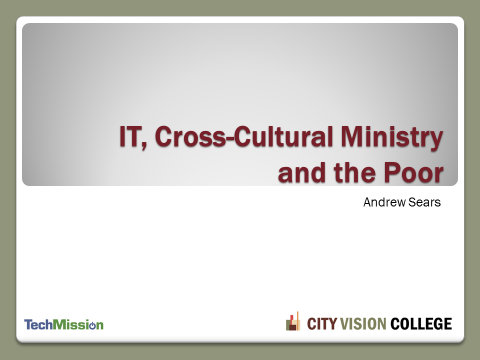
Weeks 7-8

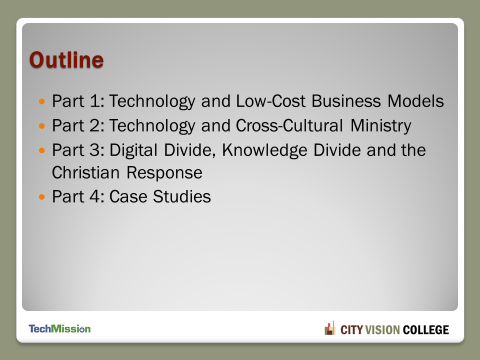
**Case Studies and Final Project**

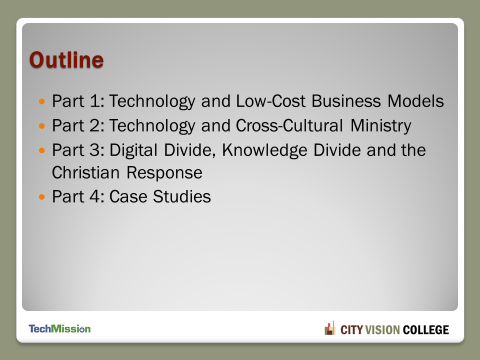
* Read/ Watch
  + <http://en.wikipedia.org/wiki/One_Laptop_per_Child>
  + <http://en.wikipedia.org/wiki/Appropriate_technology>
  + Charity Water (founded by a Christian): <http://www.godtube.com/watch/?v=7LKYW7NX>
  + <https://vimeo.com/31094644>
* Forum
  + Reflect on what you learned from these case studies and identify at least two other case studies of technology and social change that would be helpful for future students in this class.
* Case Studies Presentation

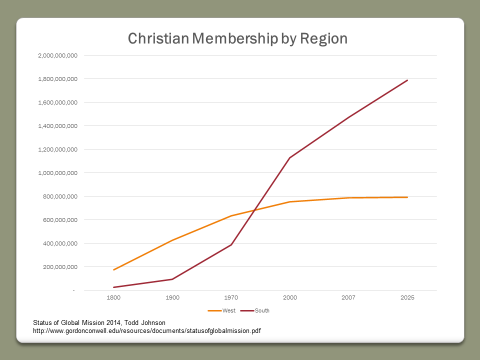
**Submit Final Project**

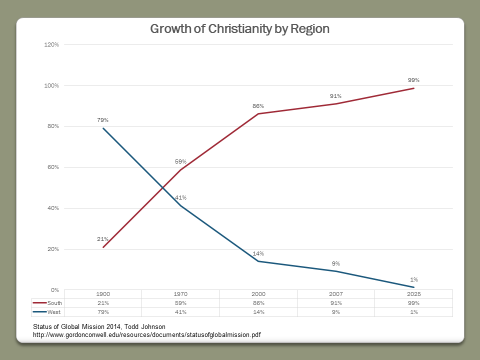
#### Technology, Innovation, Cross-Cultural Organizations and the Poor Course Materials



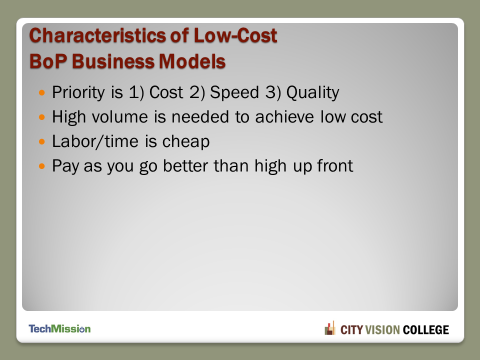


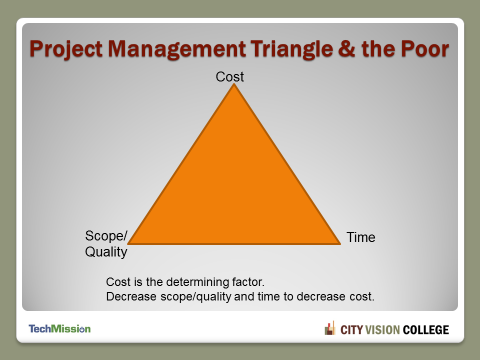


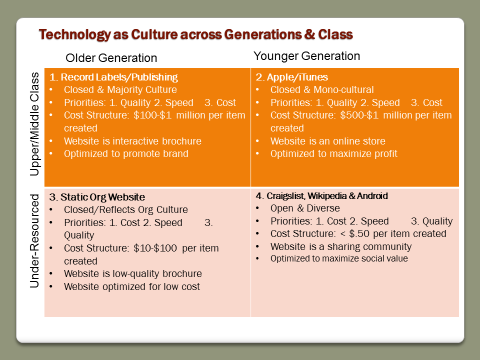


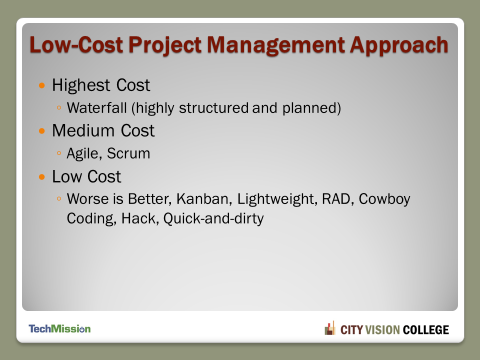


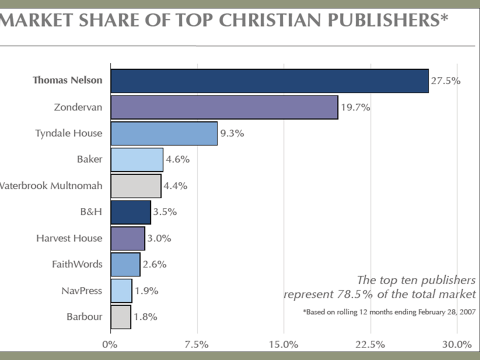
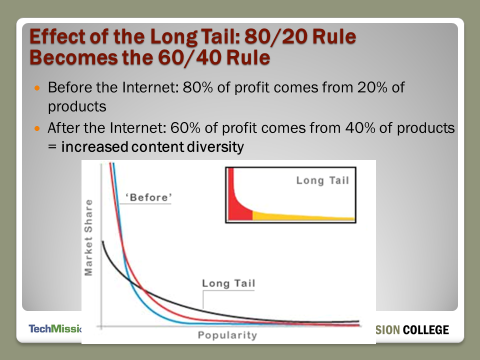


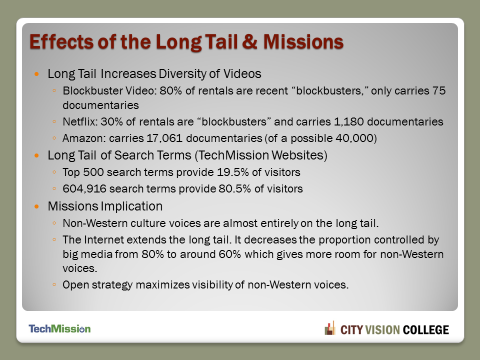


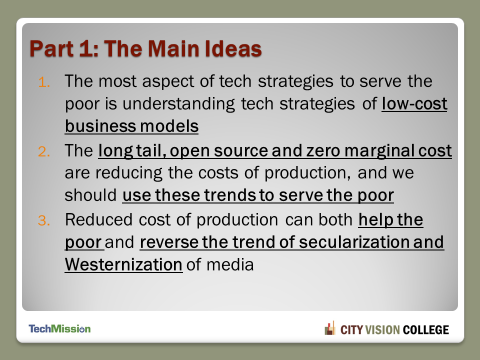


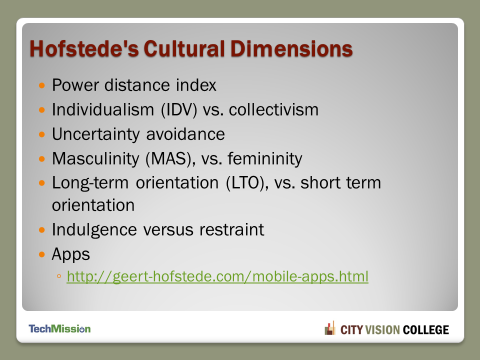
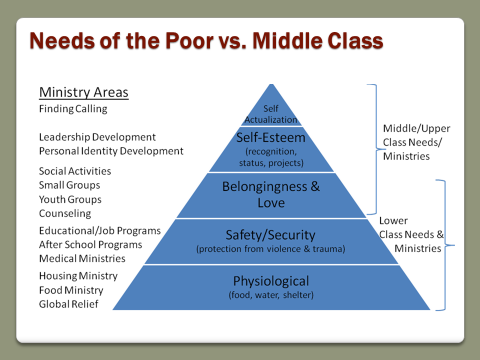
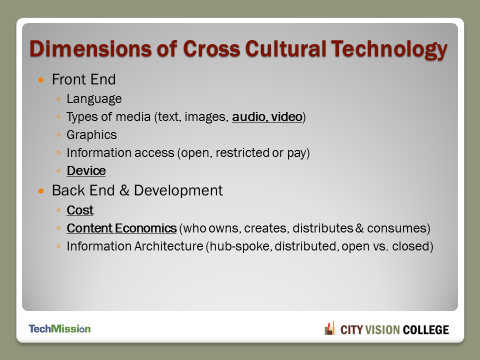
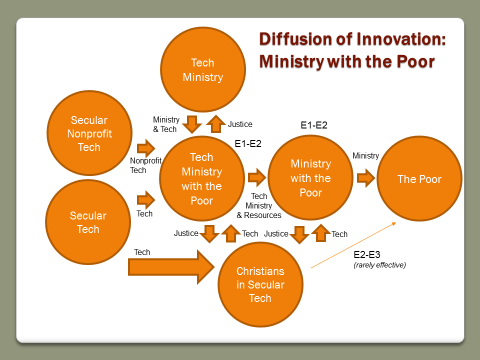
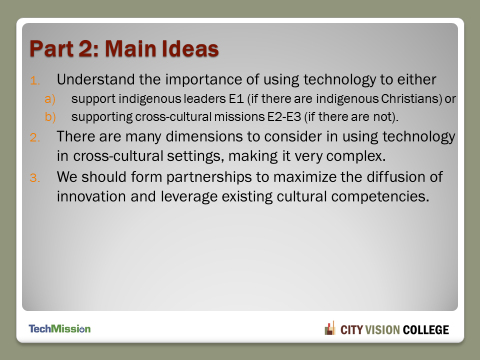


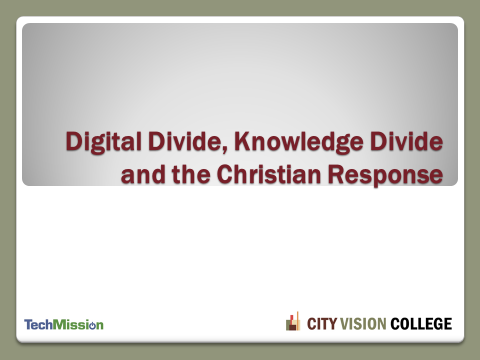


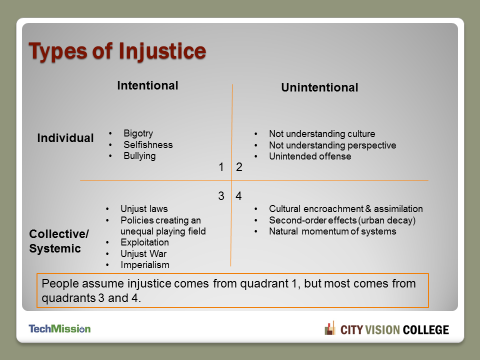


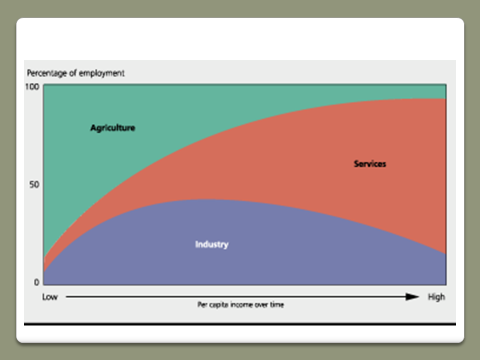


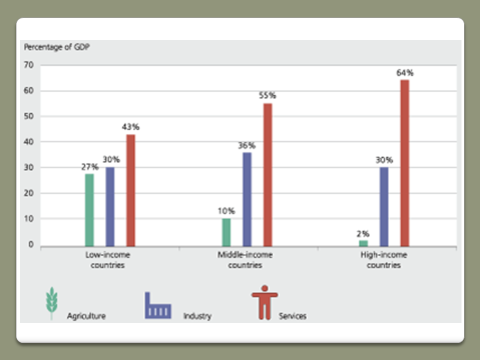


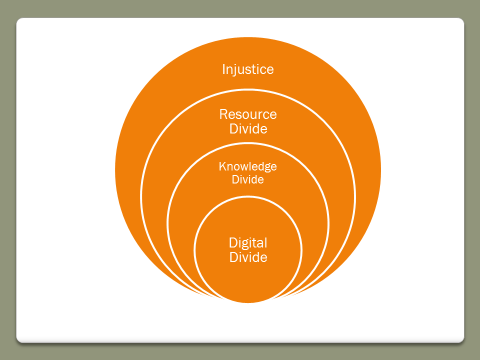
        

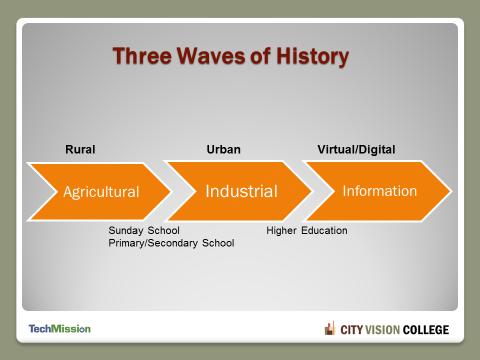


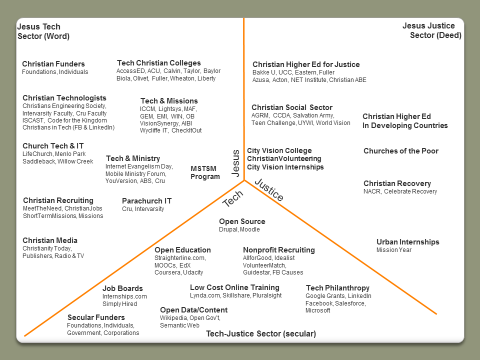


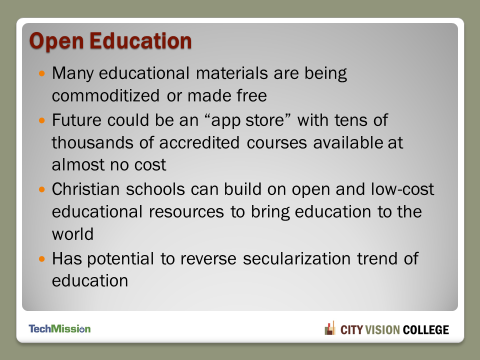


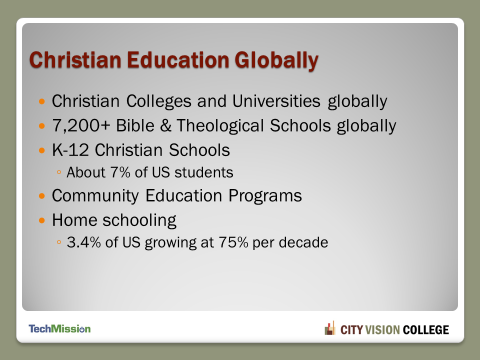


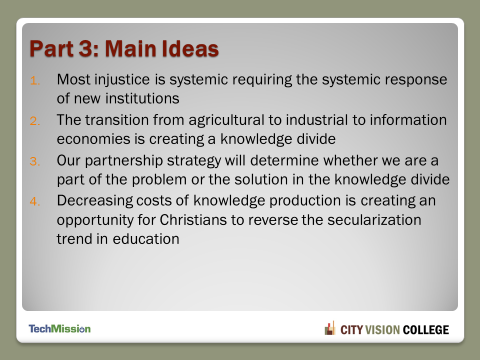


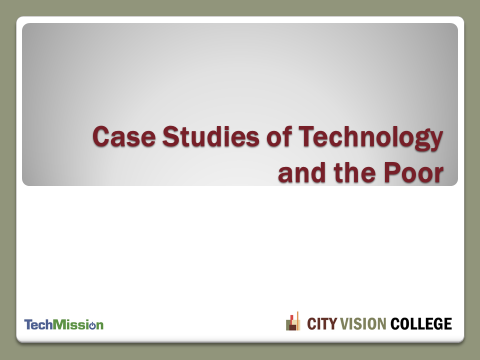


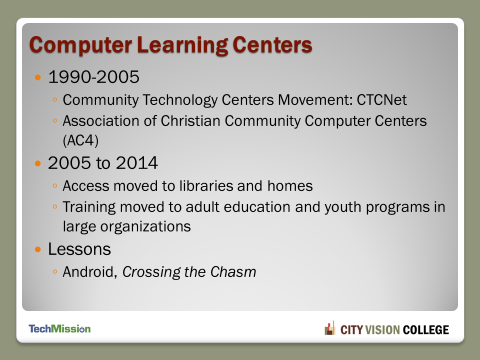


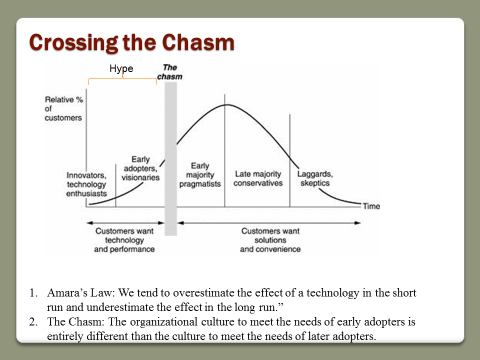


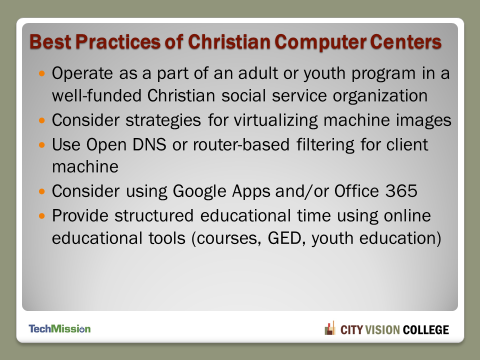


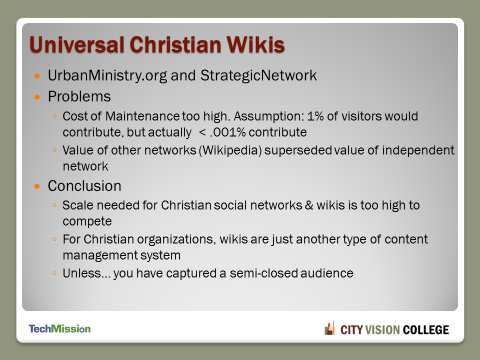


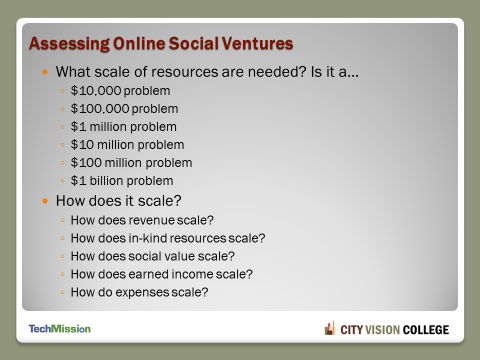




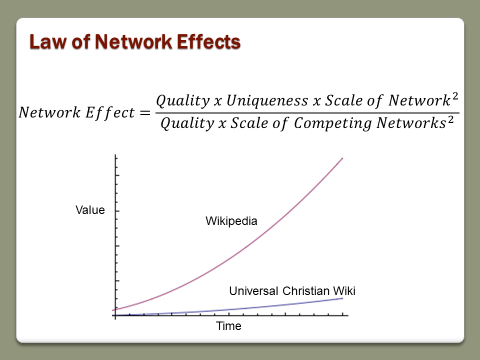




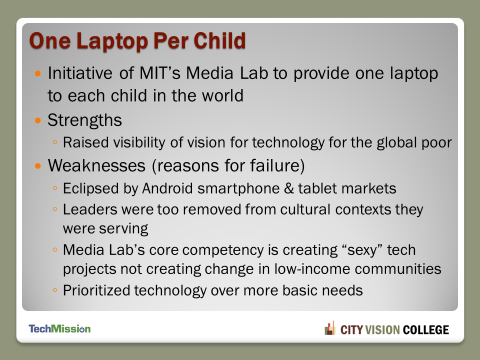














#### Course Materials: Understanding Poverty and Social Class for Christians

One of the most common topics in the Bible is God’s compassion for the poor. In the Old Testament almost every time Israel left God, they were rebuked for two things: serving idols and mistreating the poor. Jesus also clearly showed strong compassion for the poor. Yet despite the fact that the Bible talks frequently about the poor, Christians often still have a hard time talking about class and issues of poverty. The focus of this document will be to help promote a more significant dialog to aid in discussing class and serving the poor. For the purposes of this document, when we use the term “the poor” we are referring to the lower classes.

Class is something that is hard to define and even harder to understand. Many academics focus only on objective measures of class such as family income, assets, education and job type. Other people might focus more on cultural elements such as lifestyle, language, dress, food, spirituality and values. Some might view it as your status level in society and your access to social capital (resources that come from relationships). Others may define it based on your community, your level of exposure to group trauma and oppression and the class that those closest to you, that you identify with (friends, neighborhood, community, family). Class includes all of these things. It is also important to recognize that class is only one lens through which to understand injustice. Other lenses like race, gender and ethnicity are also extremely important. Exploring the lens of class does not discount those perspectives, but in fact enriches them.

**Why We Don’t Understand Social Class**

To understand social class, you have to first understand that nearly all the discussion on class has been distorted by the lens of the dominant culture. The best way to understand this is to remember back to when there were once “Negro Studies” programs at universities that were taught entirely by White professors, as if they had a better understanding of what it was like to be Negro than even the “Negros” did. These academics paternalistically defined the “Negro” using majority culture terms, values and methods. These days something like that seems absurd because we now see how paternalistic and condescending such an approach is. There are many African American Studies or African Studies programs that are led by people of African decent. In short, society has made progress toward a general understanding of the importance of a people to self-define. Groups across the world have begun to self-define and to replace, for example, the “Oriental Studies” programs of White people describing Asians with Asian-led Asian Studies or Chinese Studies, etc.

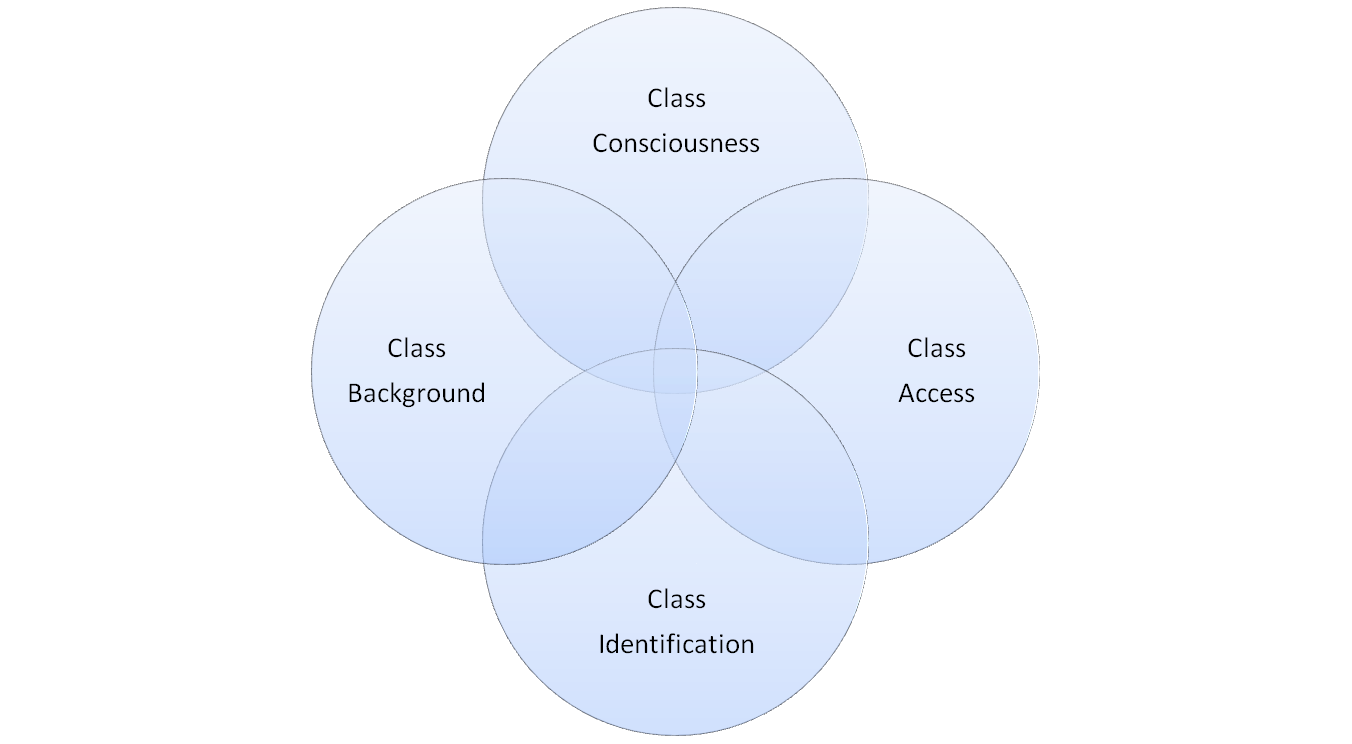
However, the one area where this trend of self-definition has not made much progress is in our understanding of social class. This is because the institutions that could enable this expanded understanding are dominated by the middle and upper class. To become an academic, even if you come from a lower-class background, you essentially must assimilate to the dominant class (middle/upper class) values. The same is true for media, publishing and other major institutions. In our understanding of social class, we still live in the “negro studies” era.

Our understanding of social class is defined using the dominant class lens with their terms, values and methods. This is seen most in academia, where class is defined through the majority culture lens, which emphasizes the objective, quantitative, analytical, theoretical and individualistic approach. It is like putting on green-tinted sunglasses, and suddenly the world looks green. Using this lens, the only things that look real are the objective, quantitative, analytical, theoretical and material. The problem is that these values are entirely opposed to the dominant values of lower class communities which think much more in terms of the subjective, qualitative, holistic, practical and nonmaterial.

What is needed is an understanding of class that is self-defined by a community from the non-dominant class. The problem is that in order for someone from a lower class background to get to a position to be able to communicate this perspective, they almost always have to assimilate to the dominant class values. It is almost impossible for someone in academia will keep their job and get tenure unless they learn to comply with the dominant class values of academia. There have been many books written about this class assimilation process in academia (Dews, 1995; Ryan & Sackrey, 1995). In my reading of these stories and people I have encountered, I have found very few stories of people in academia who came from a lower-class background and still self-defined as lower-class after staying in academia.

The result is that the entire dialog on class is from the lens of the dominant class. Usually the first thing people think about when they hear the term “class” is the communist and socialist perspectives on class. One of the many problems with those perspectives is that they defined class in the objective, material terms of income and job. The whole capitalism-communism debate was a debate using the dominant class lens of materialism. It reminds me of an old quote: “The best way to win an election is to own both candidates.” Regardless of which side won the debate, materialism (the dominant class value) would win. Similarly, this paper is focused more on social class that simply focusing on poverty, because the term “poverty” tends to emphasize only the material aspect.

Another problem with understanding social class is the concept of the “imperial middle class.” (DeMott, 1990). The “imperial middle” is the tendency of both the rich and the poor to also define themselves as middle-class. If everyone defines themselves as middle-class then we lose the ability to discuss class differences and how they shape society.



**Class Identity**

**Class Identity**

One of the most significant things to understand about class is a person’s class identity. It is important to recognize that many people will have very complex class backgrounds and avoid oversimplifying class into objective definitions. Class identity is one of many elements that make up your identity, including your personality, gender, race, ethnicity, geographical background, etc. For each element of class identity, I’ve also listed the direction a “Godly goal” of growth. Class identity has four components which include:

* **Class Background:** your past class background while growing up including a combination of family income, assets and job type; education and access to social capital; level of exposure to group trauma and oppression; class culture (lifestyle, language, dress, food, values, etc.): status level in community and society; class identity of those closest to you that you identify with (friends, neighborhood, community, family). **Godly goal: to understand class background and its implications on your unique role in class reconciliation.**
* **Current Class Access:** your current access to class community, resources and power based on income, job type and assets; education; appearance, speech and cultural fluency; access to social capital. **Godly goal: increase class access to all groups to be able to bring class reconciliation.**
* **Class Consciousness:** the ability to perceive, understand and consciously address the following: systems of classism; your class role culturally and in systems; class as culture and cultural class conflicts; your own class identity; all other aspects of class. **Godly goal: to increase class consciousness.**
* **Class Identification:** which class group(s) do you identify with based on the following: the class identity of those closest to you that you identify with (friends, community, family); allocation of resources toward class groups (money, work, time); your accessibility to a class group based on your culture, appearance, language, location, etc; your role in addressing (or perpetuating) classism. **Godly goal: to identify with the lower classes (“the least of these”).**

|  |  |
| --- | --- |
| Area of Identity | Steps of Growth |
| Class Background | Understand unique background and purpose |
| Class Access | Upwardly mobile |
| Class Identification | Downwardly mobile |
| Class Consciousness | Grow in class Consciousness |

**Class as Culture and Cultural Dimensions of Social Class**

Probably the most significant thing missing from the common understanding of class is being able to perceive **class as culture**. While objective measures of class are important, the subjective understanding of class is central to providing a perspective that is self-defined by the non-dominant class. To simplify the discussion I will use the terms “non-dominant class,” which includes the lower and working/blue collar class, and “dominant class,” which includes the middle and upper class.

The intent of this document is to help bridge the dominant and non-dominant classes by providing language that the dominant class can understand using a framework that emphasizes lower-class values. My own perspective is that I come from a lower class-background. While I have received the benefits of a strong education and now have high class access, my identification is with the lower class. In other words, I am bi-cultural and fluent in both dominant and non-dominant cultures, but I still primarily prefer non-dominant class, which is reflected by life, values, friends, work and community. Living and working in a non-dominant class community for nearly all of my life, I have worked with hundreds of volunteers, staff and friends helping them to bridge the dominant and non-dominant class worlds. From this, I have observed the most common cultural/values clashes that occur across class. To satisfy people coming from a majority culture perspective that strongly value academic research, I’ve sought out secondary research on hundreds of studies of class as culture to verify that my observations apply more generally (see bibliography below).

Based on this, I’ve developed a list of dimensions of the most common value differences that people of different classes experience. This list generalizes the value differences that often apply across class—indicating where people from the dominant and non-dominant classes often have differences. While understanding a culture is helpful, making generalizations applied to individuals is not. Many individuals will have values different from those commonly held by others in a similar social class. Class is only one component that makes up an individual’s culture and values, so often individual personality type, race, ethnicity, religion, community or other factors will trump class. Race or ethnicity may play a more significant role in a given cultural area than class, but that class tendency might still be true within a given ethnic group. For example, a particular ethnic group may typically be very reserved, but within that ethic group as you move from non-dominant to dominant class, it is likely to become more reserved. Another example is that an individual may be primarily non-dominant class culture, but have a personality type that prefers order, so their personality type might be more significant than their social class on dimensions that involve order.

The mixture of class culture, ethnic culture and personality type create a unique mix for each individual. Part of what is important to realize is that God makes us with these differences for a reason. How God makes us can help determine our roles as bridge-builders. For example, a person who comes from a lower-class background, but is detail oriented and organized might be effective at helping low-income individuals and organizations to navigate bureaucracy, tax systems and legal structures of the dominant culture. Similarly, a person from a dominant culture who has a personality type that is very adaptable may find that they have the flexibility needed to be able to effectively live incarnational among the poor.

Understanding generalizations of class as culture is helpful especially when identifying whether a conflict may have a class component related to class culture. However, generalizations of class as culture can be damaging if you use them to make assumptions about an individual based on those generalizations.

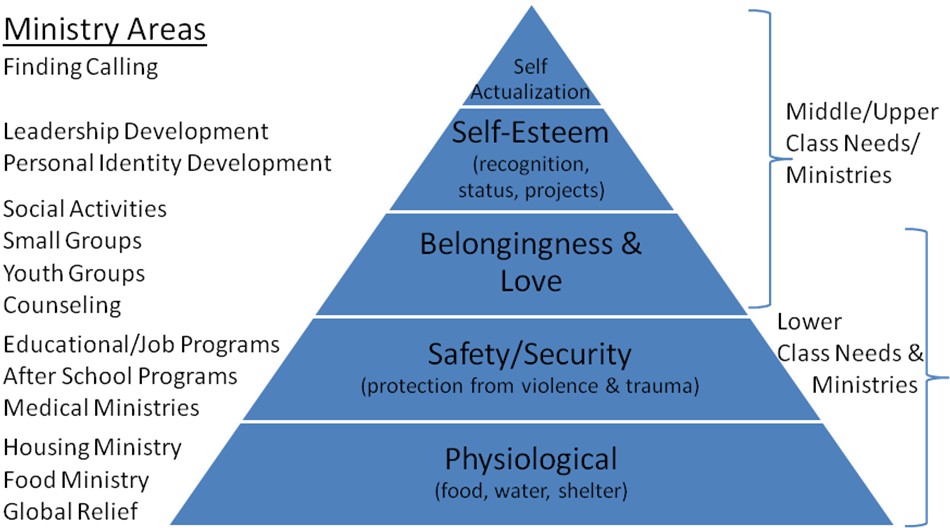
It is also important to recognize why these differences across cultural dimensions happen across class. An unhelpful and condescending perspective would be to view either dominant or non-dominant cultural tendencies as universally better. The cultural dimensions are intended to be neutral, meaning that both sides of each dimension are valuable in different context. Some of the reasons for why these tendencies exist are environmental factors. For example, there are commonalities of environment that non-dominant classes are likely to experience everywhere due to the nature of having lower income and being lower status than others. This might include: increased need for flexibility and higher tolerance of trauma because more unpredictability that is common with being lower income. Collectivism as a survival mechanism for those with limited resources. Respect for authority comes from having much higher consequences of defying authority when you have lower power. There are also self-reinforcing factors. For example, if you articulate cultural values that were optimized to maximize power, then you are likely to come up with values of being objective, competitive, efficient, orderly and masculine. Often these can become self-reinforcing factors are cyclical sins in that people that experience high trauma tend to have higher addiction rates, which leads to increased poverty that then leads to increased trauma in a cycle of poverty. Similarly, a workaholic might be successful at work which leads to increased income and increased responsibility, which leads to increased work. Sins are not neutral meaning that they are wrong. It is important to note that one sin is not worse than another, but some (like workaholism) tend to become more socially acceptable because they reinforce moving up in social class.**Cultural Dimensions of Social Class** **Your Value Preference**

|  |  |  |  |
| --- | --- | --- | --- |
| **Non-Dominant Class Value (N)** | **Dominant Class Value (D)** | N | D |
| **Relating to Others** | **Relating to Others** |  |  |
| Spontaneous | Structured order & planning |  |  |
| Relational | Objectively Detached |  |  |
| Intense | Reserved |  |  |
| Community/Family Reliance/ Collectivism | Self-Reliance/Independence/Individualism |  |  |
| Friendliness | Privacy |  |  |
| Cooperation | Competition |  |  |
| Femininity\* | Masculinity\* |  |  |
| **Relating to the World** | **Relating to the World** |  |  |
| Respect for Authority/Hierarchy / High Power Distance Index\* | Egalitarian  Low Power Distance Index\* |  |  |
| Patience | Efficiency |  |  |
| Trauma is common | Trauma is avoided |  |  |
| Ministry to Middle Class Needs | Ministry to Lower-Class Needs |  |  |
| Work is a Means | Work is an End/Identity |  |  |
| Sharing | Strong Property Rights |  |  |
| Contentment | Active Problem Solving |  |  |
| Marry earlier; more children | Marry later; fewer children |  |  |
| Lower class food, dress styles | Middle class food, dress styles |  |  |
| Lower uncertainty avoidance\* | Higher uncertainty avoidance\* |  |  |
| Short-term orientation\* | Long-term orientation\* |  |  |
| Indulgence\* | Restraint\* |  |  |
| **Thinking/Perception** | **Thinking/Perception** |  |  |
| Subjective | Objective |  |  |
| Qualitative | Quantitative |  |  |
| Holistic | Analytical/Compartmentalized |  |  |
| Experience/Practical | Theoretical |  |  |
| Non-materially Minded | Materially Minded |  |  |
| Community | Individual |  |  |
| **Communication** | **Communication** |  |  |
| Honesty and Directness | Politeness and Tact |  |  |
| Oral Tradition and Storytelling | Written Tradition |  |  |
| Simplified/Slang Vocabulary | Larger/Standardized Vocabulary |  |  |
| **Most Common Sins** | **Most Common Sins** |  |  |
| Antisocial Addictions: substance abuse and sexual | Socially Acceptable Addictions: Control, Work, Power |  |  |
| Antisocial behavior | Narcissism, Perfectionism and Superficiality |  |  |
| Increased aggression, rage and violence | Overemphasize physical appearance, having it together, career accomplishments |  |  |
| Increased Crime | White & Class Privilege & Legalized exploitation |  |  |
| Less Church Attendance | Pride/Use Church to feel better than |  |  |
| Lower Value on Education and Stewardship | Materialism, Excess and Intellectual Elitism |  |  |

**Class as Culture in Relation to Holsteade’s Cultural Dimensions Theory**

Holsteades’s Cultural Dimensions Theory is one of the most widely used theories on cross-cultural dimensions. Because of that, it can be helpful to correlate class dimensions to Holsteade’s dimensions. In the chart above, the dimensions marked with a “\*” correlate to Holsteade’s dimensions. The following is a summary of these dimensions from Wikipedia (“Hofstede’s cultural dimensions theory,” 2014).

* Power distance index (PDI): "Power distance is the extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally." Cultures that endorse low power distance expect and accept power relations that are more consultative or democratic. **Non-dominant class culture tends to have a higher power distance index.**
* Individualism (IDV) vs. collectivism: "The degree to which individuals are integrated into groups". In individualistic societies, the stress is put on personal achievements and individual rights. People are expected to stand up for themselves and their immediate family, and to choose their own affiliations. In contrast, in collectivist societies, individuals act predominantly as members of a lifelong and cohesive group or organization (note: "The word collectivism in this sense has no political meaning: it refers to the group, not to the state"). People have large extended families, which are used as a protection in exchange for unquestioning loyalty. **Non-dominant class culture tends to be more collectivist.**
* Uncertainty avoidance index (UAI): "a society's tolerance for uncertainty and ambiguity". It reflects the extent to which members of a society attempt to cope with anxiety by minimizing uncertainty. People in cultures with high uncertainty avoidance tend to be more emotional. They try to minimize the occurrence of unknown and unusual circumstances and to proceed with careful changes step by step planning and by implementing rules, laws and regulations. In contrast, low uncertainty avoidance cultures accept and feel comfortable in unstructured situations or changeable environments and try to have as few rules as possible. People in these cultures tend to be more pragmatic, they are more tolerant of change. **Non-dominant class culture tends to have a lower uncertainty avoidance.**
* Masculinity (MAS), vs. femininity: "The distribution of emotional roles between the genders". Masculine cultures' values are competitiveness, assertiveness, materialism, ambition and power, whereas feminine cultures place more value on relationships and quality of life. In masculine cultures, the differences between gender roles are more dramatic and less fluid than in feminine cultures where men and women have the same values emphasizing modesty and caring. As a result of the taboo on sexuality in many cultures, particularly masculine ones, and because of the obvious gender generalizations implied by Hofstede's terminology, this dimension is often renamed by users of Hofstede's work, e.g. to Quantity of Life vs. Quality of Life. **Non-dominant class culture tends to reflect more femininity.**
* Long-term orientation (LTO), vs. short term orientation: First called "Confucian dynamism", it describes societies' time horizon. Long-term oriented societies attach more importance to the future. They foster pragmatic values oriented towards rewards, including persistence, saving and capacity for adaptation. In short term oriented societies, values promoted are related to the past and the present, including steadiness, respect for tradition, preservation of one's face, reciprocation and fulfilling social obligations. **Non-dominant class culture tends to show more short-term orientation.**
* Indulgence versus restraint (IVR): The extent to which members of a society try to control their desires and impulses. Whereas indulgent societies have a tendency to allow relatively free gratification of basic and natural human desires related to enjoying life and having fun, restrained societies have a conviction that such gratification needs to be curbed and regulated by strict norms. **Non-dominant class culture tends to be more indulgent.**

**Middle Class Ministry and Lower Class Needs**

One example of how our class culture lens causes problems is when middle-class ministries try to serve the poor, but instead focus more on middle-class needs. One way of understanding this is from a concept called Maslow’s Hierarchy of Needs (see adjacent).

The basic idea is that some needs that a person is experiencing can take precedence over others—if you are about to die of dehydration or hunger, then you aren’t worried about your social calendar on Friday night. The issue is that the primary needs of members of the middle class churches (social, esteem, self-actualization) are different than the primary needs of under-resourced communities (physiological, safety, social). Most of the programs, tools and ministry of most middle-class churches are focused on middle class needs, so when they serve the poor, they use a ministry model that serves middle class needs. For example, I once came across an upper-middle class church ministry that was a job program for the homeless. The entire focus of their program was based around asking the participants, “If you could do anything you want, what would you do?” and then helping them prepare for a career in that. The problem is that this is a self-actualization question, one that is a great question to ask if you already have a home, food, friends and savings that might allow you to pursue self-actualization. Effective job programs for the homeless almost universally focus on preparing them for a limited range of entry-level jobs that will enable them to quickly gain employment and get off the street.

The most common ministries in middle-class communities are ones that help members find their calling (self-actualization), peer leadership development and personal identity development (esteem) and small groups (social). Some of the most common ministries in under-resourced communities are often after-school programs (safety), educational/job programs (economic security), food pantry/soup kitchens, housing and medical care. It is easy for middle class communities to say that their needs are the “spiritual needs,” while the more practical needs of under-resourced communities are not spiritual. The reality is that they are all spiritual needs because Jesus was always holistic in his ministry, meeting both the physical and spiritual needs of people. He fed the five thousand; he didn’t tell them not to worry about eating because he was meeting their “spiritual” needs.

Ministry needs is just one value difference between dominant and non-dominant class cultures. There is a lot of depth in just this one value difference, and there are many other value differences. The only way to really understand all these cultural differences in full depth is to experience them directly by immersing yourself in under-resourced communities (and resourced communities), but this document will attempt to provide an introduction to these differences by providing some examples of cultural conflict across class. To protect individuals, these examples do not represent any particular person, but rather represent caricatures based on an amalgam of people that I’ve had experience with over the years.

**Cultural Conflict across Class: Sam**

*Sam is a recent college graduate with a middle class up-bringing who goes to work in an after-school program in an indigenous organization that serves children from a lower-class community. He is used to an orderly environment, where people are emotionally reserved and are isolated from frequent exposure to trauma. Each day in the after-school program he can barely handle the chaos of the children running around. He constantly judges the organization for not doing things with enough quality—the building is not well kept, the lessons with children are not well-planned, things are constantly changing and there is little organization. When the after-school program director speaks to the children in a very stern, loud, commanding voice, he can’t believe how rude the after-school program director is being to the children, but he observes that the children do respond. There is loud music playing in the staff office every day, which initially seems “cool” to him, but later begins to drive him crazy after listening to it every day. He judges the organization for how disorganized it is, and blames it on the staff. He finds it very difficult that he is not given much direction and views that as bad management. He is frustrated that it seems like his job description changes every day.*

*He also judges the other staff for insisting on wearing dressy clothes every day, because he goes to a church that considers itself progressive because most people wear shorts and jeans. He also judges the other staff for not eating healthier foods. He judges the staff for following a strong hierarchy that makes it clear that the children are below them in the hierarchy. Initially he tries to meet the children “on their level,” acting very polite and encouraging them to have “open” time where they can do whatever they want, but he quickly loses control of the children. He is shocked by the trauma of finding out that another staff person was robbed. He feels out of place because most of the other staff have a traumatic background and have family members that are in poverty, jail or are addicted. He is having a hard time sleeping at night, and is not sure what to do.*

This is what interpersonal class conflict looks like. What should he do? Should he just “suck it up” and take everything as it is even if that means barely being able to keep his own sanity? Should he just leave? Usually what happens in this scenario is both—they are so overwhelmed that they just suck it up initially until they can’t take it any longer and then they just leave.

The short answer is that Sam needs to find his role in the Body of Christ in addressing injustice (understanding his class identity), stretching himself cross-culturally (identifying more with lower class communities), but staying within the limits of how God has made him to serve sustainably. Middle class people who have travelled abroad understand that when visiting another country, they should just try to take the culture as it is without trying to change the country to fit their needs. They might find a group of friends to help ease the transition either from their cultural background or natives that are good bridge-builders. They will be intentional about learning the culture and language and immersing themselves in ways to grow cross-culturally. They might also moderate their exposure to elements of the culture that they can’t handle in order to make their experience enjoyable and sustainable. They will understand the historical reasons why others in the country might be initially hostile to them and act accordingly while calmly drawing a firm boundary against abuse. They will try to find a niche in the country where their own cultural background and skills are an asset.

The problem is that while many middle-class people understand these ideas in approaching another country, they somehow don’t understand that the same principles apply when operating cross-culturally within their own country. They miss the concept that in moving from a middle-class white community to a lower-class minority community, they are likely making a cultural shift that is at least as significant as if they had moved to a European country. The same cross-cultural principles above apply.

It is important for people from middle and upper class backgrounds to try to stretch themselves to find an area where their skills and cultural background can be an asset in serving lower-class communities. Lower class communities are often desperate to have more people with the skills and cultural competencies of those coming from the dominant class.

**Sam revisited**

*After experiencing burnout, Sam (from above) gains a better understanding of his gifts, limitations and his role as a bridge builder. He realizes that he is really good at writing, and does grant-writing and fundraising for the organization. He finds that his middle-class background becomes an asset to the organization because he is able to serve as a bridge between the organization and those with resources. He requests an office with a door that he can close when he needs to in order to be more isolated from the chaos of the organization. He also realizes that working with the poor, living among the poor and going to church with the poor have left him culturally isolated where he has very few people in his life with his cultural background. He changes churches to attend a somewhat diverse church that is more reflective of his culture. Because of these adjustments he is able to effectively serve the poor in a sustainable way that reflects his unique call as a bridge-builder.*

**Social Leprosy**

We are living in an epidemic of social leprosy in the Body of Christ. The way leprosy works is that the body loses its ability to feel when other parts of the body are damaged. The reason why lepers end up losing parts of their body is that a body part will get injured, but because they cannot feel it, they cannot take care of it. The result is that a finger or toe could receive a crushing blow that will end up destroying it because the wound is not cared for. This is the social condition of the Body of Christ when different parts of the Body do not feel the pain of other parts. It is caused by isolating the parts of the Body experiencing the pain from the parts with the resources to heal that pain. There are intense spiritual and systemic forces that drive the world and the Body apart. This is what happens when we become relationally and socially isolated from the pain in the world through suburbanization, segregation, geographic detachment and cultural and other barriers.

It is helpful to understand how the Body of Christ is intended to work across class, and how to fight the systemic tendencies that most often perpetuate injustice. The basic principle of healthy missions is that people are most effectively served when they are being served from within their culture. This is just following Paul’s principle of “being a Jew to the Jews and a Greek to the Greeks.” Most progressive Christians understand this principle in theory, but it is something that you can’t really learn until you’ve experienced it. It is from the experience that you understand the depth of the systemic reasons for this principle being incredibly difficult to apply.

This is how the system works to unintentionally perpetuate injustice. A lower-class community will be most effectively served by those sharing a lot their lower-class cultural values. In short, often the most effective organizations in serving the “poor” will be those with non-dominant class values. The challenge is that because they have non-dominant class values it becomes very difficult for the organization to access the resources of the dominant class (Incite! Women of Color Against Violence, 2007). The very things that make them so good at working with under-resourced communities are things that are at the other end of the value spectrum in terms of what the resourced communities are asking for. The spontaneous street-culture personality needed to adapt to the chaos in under-resourced communities is very different from the organized, orderly personality needed to manage accounting, write grants, relate to funders, track detailed outcomes and provide the structure needed to retain dominant class staff and volunteers. What most organizations will do to adapt is to have different staff, but even with that, the challenge is that usually one class-culture or the other dominates. Most often it becomes a question of “Will you adopt a culture that is good at serving the community or a culture that is good at attracting funders?”

This tendency can also keep much of the resources from middle-class churches from reaching the poor. Middle-class churches will often set up volunteer programs where it takes more resources to manage the volunteers than the volunteers are providing to under resourced communities. The end result is that the volunteer programs are serving the volunteers rather than under-resourced communities. This is fine because programs like this are needed to connect people to the needs of the community to change their hearts. It becomes a problem when the church considers these resources meeting middle-class volunteer needs as their primary means of “giving”, and does not focus more of its resources for the poor in ways that actually reach the community. There is a similar tendency of middle-class churches to give most of their resources to middle-class missionaries serving the poor. This helps the poor only if those people receiving the resources are able to multiply that gift into more resources for the poor, otherwise it would be better to give directly to effective indigenous ministries serving the poor (where “indigenous” means reflecting the class culture and ethnic culture of those being served). My guess is that for most progressive middle-class churches that try to give resources toward the poor, about half of their resources go toward middle-class volunteer programs and about half go toward middle class missionaries, with less than 20% of that making it to actually serving the poor.

The end result is that the vast majority of resources go toward organizations that have the dominant class culture organizationally, but are not very effective in serving under-resourced communities. The reason is that program participants have to essentially operate cross culturally in order to receive any services. A recovering addict, for example, might have to learn how to act “middle class” to be able to receive treatment services. On one hand, this is helpful because some of these skills will be needed to make it in the world, but on the other hand, it raises an unneeded barrier that combines cultural class assimilation with becoming sober. The same principle could apply to kids in an after-school program or other programs.

The solution is for both sides to value the other. When working in an under-resourced community, the dominant culture person needs to respect that they are essentially “in another country” and to accept that for the organization to be most effective, it needs to be close to the culture of those it is serving. That person will have to stretch themselves to adapt to many uncomfortable aspects of the organization. Similarly, the leaders in the organization need to realize that if they do not stretch themselves to accommodate people from dominant class backgrounds, then the organization’s effectiveness will be limited because they will not be able to access the resources they need.

My experience is that the greatest need of indigenously-led organizations serving the poor are people who are detail orientated and organized and can help them navigate the accounting, tax, legal, funding and bureaucratic systems of the world. These organizations are desperate for accountants and grant writers, but their culture makes it difficult to retain them. The challenge is that it takes someone who is able to operate in an organization with a dominant culture that will never be as detail oriented and organized as they would prefer, but to help them become more organized.

While this is easy to describe in theory, the process of actually doing this is extremely painful. Usually the problem is that the cultural divide is so wide that both sides are stretched to their limits (meaning sleepless nights, effects on marriages/families, depression and rage). Usually one side or the other wins, and the organization either ends up being close to the community but without resources or very resourced but culturally distant from the community. What is needed is to stay in this cross-cultural tension within the limits of what we can handle—in other words we are called to a path of suffering for the sake of others to the extent that God has enabled us.

**How Systemic Forces Isolate the Poor: Sherry**

*Sherry comes from a middle class background. In college, she had a powerful experience with God related to serving the poor, and decides to pursue that as a calling. She moves into the inner-city with an idealistic view and attends a Black church in an under-resourced community. After a few months she leaves the Black church, judging the pastor for a number of reasons. She has a hard time receiving much in the worship because it is different and more expressive than she is used to. When she goes to a Bible-study it more often feels like a mini-sermon than the inductive Bible study with lots of peer discussion that she is used to and enjoys. She also feels like they put too much emphasis on the Holy Spirit and experience in their relationship with God and wavers between judging them and feeling ashamed for not having as many personal experiences herself with God. She is offended by such strong appeals for giving during offering time at church. Her understanding of class has to do with income, so her primary effort in class reconciliation is to spend hardly anything, causing her to become bitter at others in the church who don’t do this. Sherry starts thinking her thriftiness makes her more authentically “lower class” than others who grew up in the community. Finally, she leaves the church, and moves to another church and has a similar experience and leaves again until finally she finds a community of people with a middle class culture living in the city. She invests her resources there and almost none of these resources make it to indigenous leaders in the community. Her own ministry shows limited success, and the net effect of her effort is that little or no resources end up going to those who are having effective ministry.*

The challenge is that Sherry only had the dominant culture lens for understanding class, and was not able to see that most of the issues she was judging others on were class related (she was not fully class conscious). If she had understood that, she may have explored further. She may have observed that the things that she didn’t like about the church (strong leadership, experience/Holy spirit, worship style) were exactly what attracted the local community and made the church effective. She may have found out that the offering appeals were because the church was about to lose its heat and electricity because of lack of funds. Because she was not fully class-conscious, she could not identify with the poor in ways that counted the most (respecting their cultural values and sharing her social capital and resources). She may have realized that limited spending and lifestyle is only one aspect of class culture, and she might have put more of her effort into adapting her values to match the class culture of the community. Her problem is not that she eventually ended up in a community of middle-class people. Many people with a middle-class background serving the poor will eventually end up in a community of bridge-builders that may come from a middle class background or are currently middle-class. The key issue is how that community of bridge-builders use their high class access to bring resources to indigenous leaders in under-resourced communities. Class reconciliation involves fighting the systemic tendencies to limit resources that go to lower-class communities, and to do that they need to give out more resources than they are taking in. She needs to understand that the systemic tendency is that often middle-class groups serving the poor can become a net loss of resources serving lower class communities. This is because while they may get donations from churches that are giving to groups “serving the poor,” the middle class community still takes in more resources than they give out to indigenous leaders. If the middle class community serving the poor is not multiplying the resources it receives to give more to indigenous leaders, it would probably be better to just let those funds go directly to indigenous organizations.

One challenge is that there are strong systemic currents that strongly push people to live almost exclusively in either the dominant class or the non-dominant class culture. Even for those who try to bridge this divide between resourced and under-resourced communities, there is an intense current that drives them apart. Here is how it works. Often, a dominant class individual will volunteer or intern in an under-resourced community. During that period they experience the strain of living in two worlds with two different value systems. As they become more immersed in under-resourced communities, they may experience a moderate feeling of being crazy as they try to internally reconcile the different worlds. Eventually, they will have to decide which community will be their primary community and which class culture they will primarily operate in. This is fine, and the way it should be, because people can serve the poor from both resourced and under-resourced communities. What is important is learning how roles change depending on which class environment you are immersed in and how to effectively play your role in the Body of Christ in serving the poor.

Another challenge is that often someone from a resourced background will serve in an under-resourced community and adopt many of its values. Later they will realize that they are not called to be immersed in that community long-term and return to the dominant culture, but sincerely desiring to retain the values they gained from their experience. As they are re-immersed into the dominant class culture, there will be a heavy current that will try to re-assimilate that person back into the dominant culture values. Their values and lifestyle may gradually change back to what they were before, and they might live with a nagging guilt that they sold out. Because of that guilt and the fear of conflict, they might avoid their friends who are still immersed in under-resourced communities. The end result is that they have lost touch with the pain of under-resourced communities.

**Sherry Revisited**

*After spending several years recovering from burnout when she did not actively do anything to serve the poor, Sherry makes several shifts. She moves from her middle-class church to attend a predominantly White church that is largely working class and low-income. She becomes friends with several low-income women and becomes a mentor to them. She helps them with their taxes and to work through bureaucracy needed to advance their lives. She works in a large corporation, but is very active in the foundation of the corporation and advocates for funding policies that increase funding to indigenously-led organizations, which happens to include many Black and Latino ministries. She later develops a mentoring program with the company that partners with local organizations to provide job placements for people from at-risk communities. She has found balance in her life using her gifts to advocate for the poor while still spending most of her time in dominant class cultural settings.*

**Class Reconciliation for Those Living in Resourced Communities: John**

*John is a professional graphic designer who feels called to serve the poor and comes out of a church that strongly emphasizes relational ministry. He once had a great experience for a week of working at a camp for inner-city children. He tries working on the “front lines” in a low-income Latino community. Each week seems to get worse as he is having difficulty connecting with the children and gaining their respect. He keeps trying harder and harder until finally he burns out. He decides that serving the poor just isn’t for him, and moves to the suburbs and makes a lot of money as a professional graphic designer. As he goes to a suburban church, he quickly gets caught up in the cultural momentum of the church and loses touch with his friends in the city. A few years later, he gets married and has two children. They buy a house that stretches the limits of his income and buy two new cars that put them in significant debt, so he has to work overtime to pay the bills.*

The issue for John is that he needs to realize his unique class background, and not feel guilty if God has called him to live most of his life in a dominant class setting. Being in full-time ministry is not the only model for serving the poor, but often that is the expectation that people are taught. John needs to recognize that his life is about following Jesus and ministering to others regardless of his class environment, and a significant part of that is serving the poor. He needs to understand his role in class reconciliation in the Body of Christ given his class identity and the likely difficulties that he will face. In following that path from within a dominant class environment, he should go into ministry with an understanding of how intense the pull will be to assimilate to middle class values. He should make an intentional effort to surround himself with people, books and videos that reflect his values for the poor in order to offset the materialism he encounters in the rest of his environment. He should be frugal with both his money and time in order to give both monetarily and of his time to effective indigenous ministries serving the poor. He should recognize that God doesn’t call everyone to work at the front lines, and he is still following a relational ministry model if he is resourcing those on the front line who are building the relationships. He could provide volunteer or discounted graphic design to indigenous ministries serving the poor. When he works with those ministries, he should have a lot of patience and tolerance for any shortcomings, recognizing that the organizations most effective at serving the poor will often not match his own class values.

**John Revisited**

*John realizes that he over-reacted to the burnout, and after his children start school, decides to re-explore ways to be a bridge builder. While his graphic design company has become a multi-million dollar business, he decides to invest 10% of his staff time doing pro-bono projects for ministries. He creates a pro-bono grant application and decides to work with 3 of the 30+ applicants for free design services each year. In addition, he develops a partnership with an inner-city technology school to place well qualified high school students as interns.*

**Learning Points**

The following are a few key learning points from these stories for those coming from resourced communities.

* **Find your Unique Role.** Most people serving the poor think they have to be in the “front lines” working directly with the poor, because that is what is most often modeled. Many people are called to other roles in the body to be a bridge builder in ways that fit who they are.
* **Build and Maintain Class Consciousness**. The most important step you can take is to stay connected relationally with people immersed in low-income communities. This could mean going to a multi-class church or small group (a multi-racial church without the multiclass element doesn’t really address this). It could mean seeking out a friend who is involved in serving the poor and asking how you can support them. Recognize that there are systemic forces that keep the resources from getting to those who have non-dominant class culture and are effectively serving the poor. Continue to immerse yourself in relationships, books, videos and activities that keep your heart connected to the pain in the world.
* **Identify with the Poor**. Live a frugal lifestyle in order to have more money to give to the poor. It is important to recognize that resourced communities are often the “mouth” in the Body of Christ, and if the mouth uses all the resources, then the body won’t function very well. Provide professional skills that are greatly needed in under-resourced communities like accounting, grant writing, web/graphic design, computer skills, construction, legal support, serving on boards, securing corporate donations and connecting organizations to potential funders. It is important to start with what the community needs by asking leaders, and see where there might be a match with your skills.

I provide a more thorough description of the steps involved in the process to build class consciousness and identify with the poor through a Class Identity Development process described in “Ethnic Identity Development for Christians.”

**Class Reconciliation for Those Serving in Under-Resourced Communities: Mary**

For those that choose to be immersed in under-resourced communities, often they will experience a cultural “tipping point” where they essentially “go native” in terms of their values. At this point, they will often get into conflicts with their friends in resourced communities out of anger because the dominant class values now seem crazy. This person will then lose most of their dominant class friends, and have more and more friends in under-resourced communities. After this initial season of anger is over, they find that they have lost most of their old friends both because of their own initial anger and because their friends avoid them out of guilt. It is in this way that social leprosy is perpetuated.

*Mary is from a lower-class background, and later joined a middle class church where she started leading their outreach ministries. As her passion for the poor increased, she started working full-time in a Christian community development ministry and moved into a low-income neighborhood. Each time she commuted back to her church, she would experience culture shock because of the differences between her church and her work environment. She spent her days working in an environment where if there were only a few thousand dollars more available, she could help keep a family intact and off the streets. Then she went to her church where she could not relate at all to their concerns. The stress of living in two worlds started to keep her from being able to sleep and was affecting her marriage. She did not want to leave the church, so she angrily confronted her friends to try to get them to understand where she was coming from. Finally she decided that the stress of living in two worlds was too much, and because she knew God had called her long-term to serve the poor she left her middle class church to serve the poor. Because her friends in her church felt guilty and judged by her, she lost most of her resourced friends. Since most of her new friends were under-resourced also, she lost most of her connections to bring resources into her community development organization. Her work in the community is transforming many lives, but she is concerned that the utilities might be cut off to her community development organization for a lack of resources and they are having a hard time making payroll.*

It would have been helpful for Mary to realize what was going on for her during the stress of living in two worlds. She should have focused more on her own needs rather than trying to change her friends. She should do her best to keep her resourced friends connected with what she is doing, and not be ashamed to tell them about the financial needs of the ministry and ask for help. She should be intentional about maintaining and rebuilding her relationships with those in resourced communities, without fully expecting them to adopt her class culture. She should develop a relationship with the leadership of her former church where they might bring her in as an expert with some authority to help the church understand class. She should use that authority to then explain to the church how systems of classism work to isolate the poor, and to recruit their help and suggestions of how to work against those systems.

The common theme across all of these cases is that what is needed is for each side to understand how the system and spiritual forces work against reconciliation and to be intentional about working against those tendencies by keeping the connections alive.

**Megachurches and Middle Class-Ministries**

Another issue is understanding some of the class implications of the emerging megachurch model. The issue is not so much about the size of megachurches as it is about allocation of resources because they are often made up of the middle/upper classes. Most megachurches in the USA follow business models which are costly, involving expensive equipment, buildings, staffing structures and marketing budgets. Most lower-class churches follow much more thrifty models of ministry. The result is that for the middle class megachurch business model to work, the average member must have at least a middle-class income. If a middle-class church were to become class diverse to the point where half its members were poor, then they would have to significantly change their model to make more efficient use of resources. What is more common is that middle-class churches that pursue racial diversity, often do so without pursuing class diversity. These churches end up being accused of “cream skimming” the high income members from Black and Latino churches serving under-resourced communities. The result of this well-intentioned push for diversity could be that the resources of the middle-class Christians that were going to a church primarily using those resources to serve the poor, are now going primarily to serve the middle class.

This is not to condemn megachurches, because they have many advantages. Many megachurches in developing countries are more thrifty than smaller lower-class chuches in the USA. The important thing to recognize is the systemic tendency to keep resources from the poor and to work against that tendency. This also isn’t an argument against megachurches pursuing diversity. The point is if they are going to pursue racial diversity, they need also pursue class diversity in terms of the members, the culture of the church and the background of its leaders. If they cannot achieve authentic diversity across members, culture and leadership, then they are better off partnering with ministries that can. The key questions for middle-class churches pursuing class diversity are:

1. What portion of their resources are going to serve the poor? Is this enough to offset the systemic benefit they get for being a middle class church?
2. For ministries they are supporting (or running) that are serving the poor, how closely do they match the culture and needs of those being served?
3. For volunteer and short-term missions programs, what portion of the resources actually make it to serving the poor? Do the volunteers provide more resources to the poor than it costs to coordinate the volunteers?

The best megachurches are those that know their role in the Body of Christ. They recognize God’s gift that they have 2 to 10 times the resources per church member than churches of the poor, and recognize their stewardship roles based on this. They may recognize that given geographic and cultural factors, they may not be able to achieve the full-depth of racial and class reconciliation that they might like. They recognize that the very culture, values and methods that make them successful in serving middle-class communities would make them unsuccessful in serving the poor if they were to do it on their own. They recognize this class cultural barrier, and respect and support the different culture, values and methods of ministries with a lower-class culture serving the poor.

Based on this recognition, they make their ministry model as thrifty as possible so that they can give the majority of their resources away. They are intentional about focusing the majority of their giving on indigenous ministries serving the poor, and they give without trying to control those ministries to get them to match their middle-class values. The majority of their volunteer programs intentionally focus most of the resources on reaching the poor through indigenous ministries. They have some “middle-class” volunteer programs that are primarily serving the volunteers, but recognize that most of these resources are not reaching the poor. They encourage their members to “tithe” their skills to charities by providing pro bono work for nonprofits. Their members also are intentional about extending their social capital to the poor by connecting others with relationships that could provide jobs, grants or donations. For any resource or service that they offer to the wider body of Christ that they may charge for, they provide scholarships and discounts for those coming from low-income communities.

While this trend of middle-class dominance often applies to megachurches, it is also frequently true in other churches and ministries. One of the most significant reasons for this dominance of middle-class ministries, especially among parachurches, is the pervasiveness of individual relational fundraising. Many parachurches have been able to grow to have thousands of staff because they require that each staff raise their own support from their own network of relationships. The problem with this model is that it effectively limits staff to be those who come from middle or upper-class backgrounds. One main advantage of this model is that it scales well to thousands of staff and it works well with the human dynamics of fundraising. Some progressive parachurch ministries have started to allocate a percentage of every staff’s fundraising goal to go toward funding staff from under-resourced communities. The problem is that these goals are often too small (2-3%) to make up for the systemic forces of class. If the goal of the parachurch is to have their staff match the demographic of those they are serving, then most ministries will need to set much higher goals to achieve this staff diversity (likely 10-50% depending on the demographic they are serving).

Whether it is middle-class megachurches or parachurches, what is important is that these ministries are stretching themselves to serve the poor. The pastor is responsible for leading the organization and should at least push hard enough that the organization feels moderately stretched. In parachurches, this may mean that each individual feels stretched in their individual fundraising goals rather and bearing some of the burden for those from less resource background. This is not some demand that a church or ministry ignore all of their other goals and priorities for the sake of the poor, but it is a call that we each stretch ourselves so that we too can feel some of the suffering of the poor.

**Vision for Class Reconciliation**

While all of this may seem hard, there is enormous potential for God to move as we pursue reconciliation. In the 20th century, over 80% of the growth of the Christian church has come from the southern hemisphere and Asia, and in the future, over 95% of the growth of the church is projected to be in these areas. Over 70% of this growth has been in urban areas, which is projected to be 75% of future growth. The problem is that the majority of the resources of the Body of Christ are trapped in the suburbs of the Western world. Imagine what could happen in the next century if the resources of the Body were connected to the life and growth of the Church in under-resourced communities. I believe that the Global Body of Christ could rapidly increase its ability to transform the world, and revive the Western Church. I’m convinced that class is the most significant barrier to that happening.

People often like to disparage the Church, but they often fail to see its potential and past successes. I recently read a prominent secular historian who was asked, “What was the most significant historical event of the 20th century? Was it the world wars, the cold war with communism or what?” His answer was that if you project the long term impact of historical events, probably the most significant event was the growth of Christianity to over 1 billion new Christians, largely of the poor.

While Communism claimed to be “for the poor,” it was essentially rooted in a focus on materialism (a middle class value). The poor have decided that what is more important to them is a movement that they are leading, one that reflects their values and is bringing transformation to their communities. That movement is the spread of indigenously-led Spirit-filled Christianity in under-resourced communities. Many sociologists have noted that a major side effect of becoming Christian is that people then become “upwardly mobile” in terms of their class resources. Reflecting on the 20th century, Christianity has had the effect of lifting hundreds of millions of people out of poverty, while Communism ultimately failed (and arguably put more in poverty). Indigenous local churches represent the most effective institutions of the lower-classes, and they have shown the most significant results in advancing their own cause.

If you look at the global Body of Christ and the fact that Christianity is shrinking in the West, but growing in the Southern Hemisphere and in Asia, we can begin to understand which parts of the body are alive, and which parts are stagnant or dying. If we as Western Christians do not pursue class reconciliation, God’s Kingdom will still continue (though more slowly), but we will become irrelevant. In the words of General Shinseki, “If you don’t like change, you are going to like irrelevance even less.” One benefit of class reconciliation will be to bring more resources to the parts of the Body that are growing, but the other benefit is that class reconciliation will enable Western Christians to connect with the rest of the body in ways that will bring life back into the church. This is already happening in places like Boston, which has served as a symbol of the declining church in America. Boston is now experiencing its largest revival in a century—largely in ethnic churches planted by movements originating in other countries.

Historically in the Bible, when the Israelites turned away to other gods and cared for the poor, there was revival and God blessed them. If we believe the promises of the Bible, then as we pursue class reconciliation, we can expect that not only will we help bring the Gospel to the poor, but we will also experience revival ourselves.

**Questions for Discussion**

1. *Go through the list above of contrasting values in Class as Culture. For each value, mark what your personal preference is. Mark each box either Dominant (D) or Non-dominant (N). Try to list what your actual preference is, not what you think it should be. Discuss what you found out about yourself.*

1. *How does your own personality and temperament affect your affinity for dominant and non-dominant class cultures? i.e. flexibility vs. need for order*
2. *Outline your own personal history across social class. Discuss how social class affected who were the popular kids and other groups (elementary, high school, college and now). How did your friends fit into the various class hierarchies in these settings?*
3. *For those of you who have had experiences either in under-resourced communities, what has been your experience of the issues of class conflict and reconciliation discussed in this paper?*
4. *How do you think Paul’s principle in missions of “being as a Jew to the Jews and being as a Greek to the Greeks” applies to class as culture?*
5. *What are the common areas of “strain” that you have in relating to lower-class communities?*
6. *What would happen if organizations took on either all non-dominant class values or all dominant class values?*
7. *Does your community of people closest to you consist primarily of people with lower-class access or higher-class access? Does your community primarily match with dominant class values or non-dominant values?*
8. *Given your unique class culture, ethnic culture and personality, what could be the unique role you could have in class reconciliation? How can you serve as a bridge between communities with high class access and those without? How could you stretch yourself to more effectively work toward class reconciliation?*
9. *What are ideas you have in how you could grow in your own class consciousness and your connection with the pain of the poor?*
10. *What can you do to direct your class identification more toward the poor in your lifestyle, resources, use of skills, time, etc?*
11. *What are some ways that your church can grow in class reconciliation? Are there ways that your church can adapt its models to increase the resources reaching ministries with lower-class culture that are effectively serving the poor?*

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#### Course Materials: Ethnic Identity Development for Christians

**Overview Ethnic Identity Development**

The ethnic identity development process is one of the most helpful tools to equip people in cross-cultural ministry. Those who are coming from a majority culture in the US (White middle or upper class) must first learn to perceive their own culture before they can effectively work cross-culturally. The challenge is that coming from majority culture, when you are surrounded by majority, explaining that culture can be a bit like trying to explain a fish what water is. The best way for a fish to understand water is to spend some time out of the water, and for those coming from a majority culture context, that means spending some time in a different culture.

This paper provides a simplified summary of the Ethnic Identity Development process put into a Christian context. For those interested in finding out more about ethnic identity development, one of the best books explaining the ethnic identity development process from a secular psychological perspective is *Why Are All the Black Kids Sitting Together in the Cafeteria?* by Beverly Tatum. Probably the most thorough coverage of this topic is in the book *Black and White Racial Identity* by Janet Helms, which provides an extensive academic summary on how various authors have characterized the racial/ethnic identity development process.

In general, those coming from the majority culture in the US (White middle class) tend to use tools in seeking God that use an individual framework (emotional healing is just one example), largely because of the majority culture’s focus on the individual. Because of this focus, it is common for these individuals not to realize the value that more group-focused tools bring in seeking God. The ethnic identity development process is one group-focused approach that has similarities to an individual’s emotional healing process. An ***emotional healing*** process of personal development involves moving out of dysfunctional patterns and environment established in childhood where the individual can be healed from the wounds of their environment through forgiveness, then evaluate and correct for broken tendencies inherited by their family and environment, and then reintegrate the strengths from their family and upbringing. Similarly, the ***ethnic identity development process***involves some separation from the majority culture in society so that individuals can be healed from the wounds caused by society, correct for broken tendencies in their own culture, and then reintegrate the strengths from their culture of origin and other cultures. While many Christians coming from a minority cultural background may not use the term “ethnic identity development”, they still invest in developing their ethnic identity through teaching on ethnic heritage (i.e. Black History Month), attending ethnic churches and small groups, valuing positive role models from their racial/ethnic group and other ways of encouraging a positive ethnic or racial identity as a part of one’s spiritual growth.

While the emotional healing process provides a framework primarily focused on personal growth issues related to the family, the ethnic identity process provides a framework focused primarily on healing the brokenness we inherit from culture and society. Obviously these two areas of family and culture are closely interrelated, so in addressing these interrelated issues, it is helpful to use tools that provide both an individual and group framework. Social healing is an attempt to combine the strengths from both individual and group frameworks of seeking God. ***Social healing*** is defined as going through this process of healing and integration of our own and other cultures in a way that we grow more fully into who God made us to be and find healing for both personal and cultural brokenness.

For those who are familiar with the term, “ethnic identity development,” this document uses the term “social healing” as being almost synonymous with that term, the difference being that social healing includes not only race (i.e. White) and ethnicity (i.e. German) but would also include class and culture (i.e. White, male, college-educated with roots coming from a background which includes low-income, inner-city, Midwestern United States and a German/Finnish family line, etc.). In other words, social healing is a group identity development process involving race, ethnicity, class and gender.

**Stages of the Social Healing Process**

The following provides a summary of a framework for this social healing process (or the ethnic identity development process). For each stage, the “Minority Response” is used to denote the response of individuals who come from a cultural background that could not roughly be described as the “majority culture,” which could be characterized in the US as White middle class suburban culture. The “Majority Response” is used to indicate the response of those individuals coming from the majority culture (regardless of race—meaning a person of color can also have a majority response due to high assimilation into the majority culture, for example). Because these categories are not clear-cut, and because there is much diversity in the combinations of cultural backgrounds, many individuals will find themselves needing to go through the process from both the minority and majority perspectives.

**Stage 1: Unawareness.** Individuals at this stage do not yet recognize that they have an ethnic identity or culture.

**Minority Experience in the Unawareness Stage**

*Possible example: An example might be a young Asian American child who has not yet recognized that she is of a different race from her White friends.*

For minority culture individuals, this phase is the time before they become aware of their race or ethnicity. For individuals of a minority race, this stage is likely to end in early childhood.

**Majority Experience in the Unawareness Stage**

*Possible example: A White individual who believes, “I don’t have a culture. I’m just American. I’m color blind.” and does not recognize that everyone has a culture that they are coming from.*

In this phase individuals do not recognize their own cultural background, which can often lead them to be unknowingly ethnocentric. **Ethnocentrism** is the tendency of a person who, being brought up in one culture and having never significantly experienced a different culture, believes that their way of doing things is the right way.

**Stage 2: Awareness.** In the awareness stage, individuals recognize that they have a racial, ethnic and social identity. Individuals of a minority race will experience varying levels of racism in this phase although they may not always be consciously aware of it. In this stage, both minority and majority culture individuals will become more consciously aware of racism primarily on an intellectual level, but will not experience the emotional processing needed to heal its effects.

**Minority Experience in the Awareness Stage**

*Example: A Latino teenager goes to a high school that is predominately White and experiences acts of overt racism and the more covert effects of others not being interested in making friends with him. This might cause him to feel ashamed of his ethnic identity and to try to assimilate into another identity by attempting to act “White” so that he can fit in.*

Those whose cultural background is not the majority culture of society will inevitably encounter this stage to varying degrees depending on how much of their upbringing is sheltered within their own culture. For many individuals of a minority race, this phase results in an enormous amount of wounding and shame that is the result of both overt and covert racism. Individuals experiencing significant wounding and racism at this level often will later eagerly embrace stage 3, the immersion stage, where they re-immerse themselves in their culture of origin, but will have a very difficult time moving beyond that phase. Individuals that do not experience as much racism and wounding in the awareness phase have a much higher risk of staying “stuck” in this phase because they will not have as strong of a need for the healing that the immersion process brings. In general the primary issue of individuals in this stage is that they are not reconciled with their own culture.

Many individuals of a minority race or culture who become Christians may also get stuck at this phase if they come from a family that is either not Christian or if their family itself is very “toxic” or “unhealthy.” For example, an Asian American individual may become a Christian as a teenager, and since his parents are not Christian and his church is a majority culture church, it will be difficult for him to sort out which parts of his cultural heritage are Godly and which are not. This may cause him to get stuck in this phase, rejecting most of his cultural heritage because he associates most of his cultural heritage with the toxic, un-Christian attitudes of his family. His Christian growth is essentially distorted by looking through the lens of the majority culture. This is abusive and wounding when it results in cultural strengths from God being rejected or in adopting cultural brokenness of the majority culture. For example, someone may come from a culture with very strong family values, much of which could be viewed as a Godly heritage, but American culture may devalue this heritage by emphasizing independence to the extent that it becomes isolating.

**Majority Experience in the Awareness Stage**

*Example: A White college student takes a college class on race (or it could be a short-term missions trip) and is in a setting where he is a minority for a short time because he is the only White male in the class. He is for the first time able to glimpse a part of what the experience of coming from a minority culture might be like. From this experience his first response is to develop strong beliefs about the evils of racism and feel a nagging guilt of being from the majority culture. After a period of time, the strength of his beliefs might subside and his guilt may lessen, but there is always a nagging feeling that “I should be doing something.” Without a heart-level transformation he is not able to act on that knowledge, and feels guilty without taking any action.*

Majority culture individuals enter the awareness phase usually through an ***encounter or immersion experience*.** An encounter experience may be an encounter where the individual has a short experience of being a minority through a short-term or medium-term missions project (foreign or urban). An encounter experience may also involve being exposed to teaching that reveals the minority perspective or being in a college environment where the majority cultural views are challenged. Majority culture individuals encountering this phase will often be very surprised how different the world looks when they are in an environment that is no longer the majority culture. Individuals go through a process of removing “cultural blind spots” as they find that values and assumptions they just took for granted as “normal” or “right” were actually just cultural assumptions. Many individuals encounter this phase on a head-level in college where the focus is almost entirely academic and intellectual.

Most Christians who encounter this stage may get stuck here for a variety of reasons. If this awareness phase happens in a secular environment, some Christians will reject many of the lessons learned in this phase because key elements may be counter to the Christian faith, such as being guilt-based or having no role for forgiveness. After becoming aware of the injustices in society, some individuals may even consciously or unconsciously conclude that the injustices experienced by minority groups are “their own fault.” Often this is because majority culture has a strong focus on individual choice and does not recognize social or structural reasons perpetuating injustice (the book *Divided by Faith* provides a good perspective on these issues). Even more important is that many majority individuals do not realize how their personal choices can perpetuate injustice, so they feel that their only responsibility is to avoid committing personal acts of intentional racism. Even for those who believe that they should act to address social injustice, they still must follow through in the immersion phase. The primary reason most individuals get stuck in the awareness phase is that their exposures to a separate environment are for very limited time periods (like short-term missions projects), and they are unable to immerse themselves in deep relationships in another culture for a longer term (which is the definition of entering stage 3).

Generally individuals at this stage will feel varying levels of guilt related to their race and different responses to that guilt. Individuals who have a good experience in their encounter experience will embrace this guilt on a head-level and will often try to persuade others of their enlightened view of race while not really acting on their beliefs themselves or experiencing heart-level change. Individuals who do not have a positive encounter experience will usually later close off to this guilt with either anger or denial of validity of any guilt. Regardless of their experience, both groups will often get stuck at this level because although they have *processed their ethnocentrism on a head-level*, they have not had the longevity of an immersion process (stage 3) to fully address heart-level issues. While both groups may get stuck at this level, individuals who have a bad experience and wounding in stage 2 awareness in particular are likely to need some healing from this before they will be able to move on to stage 3 immersion. In addition, it is common for individuals to enter stage 3 immersion and experience significant wounding in that stage, which causes them to return to stage 2 awareness with significant bitterness that needs to be healed before they can continue growth.

**Stage 3: Immersion.** In this stage individuals immerse themselves into a culture that is a minority group within the larger society. This is defined by being in deep relationships with minority culture individuals where the minority cultural perspective is shared and is usually dominant. The goal of this phase is to integrate the strengths of that minority group, while being healed from the brokenness of the majority culture. For minority culture individuals, they already are likely to live much of their life in the majority culture, so immersion allows them to reengage with their own culture more deeply. Because much of the larger society is made up of majority culture, for majority culture individuals, immersion enables them to be in a minority culture environment both to integrate the strengths of that culture and to better understand the perspective that minority culture individuals may have.

**Minority Experience in the Immersion Stage**

*Example: An Asian American teenager entering college after going to an almost all White high-school in the suburbs, may experience part of herself in a new way when she joins an Asian American Student Fellowship. She gains an understanding that as a child she was culturally very strongly Asian American, but in high school she became ashamed of that and hid parts of herself and her culture. Among her Asian Christian friends in college, she is able to be more open than she has ever been before. For the first time she encounters many people that when she talks about her experiences of racism, they do not deny them, but they affirm them and share their own similar experiences. She finds that sharing these things brings significant healing of past shame and allows her to reclaim parts of her own personality and culture that she has often hidden. She is surprised at how angry she gets at some of her White classmates when they unknowingly shame her for her culture in the same ways that she was shamed in the past. Because of these difficulties, now almost all of her friends are Asian. She understands that from her Christian beliefs that she should forgive the past racism, but no matter how hard she tries she still knows that from her extreme anger and guardedness that has not been able to forgive. A more popular (and somewhat extreme) example might be Malcolm X earlier in life (later in life he took on more of a stage 4 perspective).*

In this phase, individuals immerse themselves in their own culture to reclaim the parts of themselves and their Godly cultural heritage that was lost. For individuals experiencing intense racism, this stage is essential for reclaiming their self-image as being created by God in His image. In general this involves largely detaching from the larger society because of pervasive racism that exists. For Christians, this generally involves seeking growth and healing in an ethnic church or small group. The basic problem is that without pursuing Jesus and personal growth within an ethnically-focused group, it is very difficult to effectively sort out which elements of their heritage should be rejected and which need to be embraced.

*It is important to recognize that immersion is an essential step in the forgiveness process.* This is because to forgive, we must first be able to name the wrongs and uncover anger, and it is helpful to have those wrongs validated by others. This step is best done in a group with others of a similar cultural background who can quickly see, acknowledge and understand the pain experienced through injustice. Individuals in this phase may often seem angry, which can be threatening to those from the majority culture that press “buttons” that may generate a strong response. In this phase, often if there is not some separation between the minority cultural group and individuals of the majority culture (who are in phase 1 or 2), the result is that individuals in the minority cultural group will get re-wounded by those from the majority culture. For an individual to share their deepest areas of wounding from racism and injustice, there needs to be an environment where it is safe to do so. Often, this involves having a group that is ethnically-focused such as an ethnic church or small group.

Many majority culture Christians will judge this group as being separatists because they fail to recognize that this is an essential step in the forgiveness process. Majority culture individuals who may judge others for being separatists often do not realize their own separatist tendencies. Those coming from the majority culture have the privilege of being able to choose whether to experience parts of life as a minority, and because of the pain involved in immersion most choose not to be in a minority culture. This could be viewed as a choice to be separatist by choosing to live in their majority culture. Many majority culture Christians fail to see that for them choosing not to join a church or community where they would be a minority is in many ways the same choice that those from minority groups make when they choose ethnic churches. In other words, a White person choosing not to join a Black church is similar to a Black person choosing not to join a White church, except that for the Black individual, the church may be one of their only contexts where they are not a minority. It is important to recognize that minority culture Christians who wish to engage with the larger society must do so primarily in a culture different from their own. It is for this reason that ethnically focused churches and small groups not only serve as an important step in the forgiveness process, but they also may serve as the only refuge where minority individuals can live in an environment where their own culture is dominant.

It is also possible to encounter immersion in a multiethnic group if the group culture has a minority perspective, which will usually mean being made up of people in stage 3 or 4 of their ethnic identity development. While multiethnic groups have the disadvantage of still having somewhat different cultural perspectives within the group, they have the advantage of being able to develop healthy cross-cultural relationships in ways that can be healing and help the forgiveness process to transition into stage 4.

**Majority Experience in the Immersion Stage**

*Example: A White Christian woman joins an almost all Black church initially because she felt God was calling her to serve the African American community, and she had been taught that the most effective ministry approach is to be under indigenous leadership. After some fairly painful experiences, she learns that maybe God has her there not so much to “minister” as to learn and grow. While she still is actively involved in addressing racism and other forms of social injustice, much of her own effort is in understanding and healing her own racist tendencies. She starts to try to “act Black,” and she takes pride in the fact that some of her Black friends call her an “honorary African American.” She finds herself learning to embrace her own “class roots” of growing up in a poor White community, and because of that often more strongly identifies with being Black than she does with being White. She may significantly overwork herself and always feel like she is not doing enough. When she offends her Black friends, and they get angry at her, she always accepts fault even if in some cases she feels like she experienced injustice. She will always let it slide because she feels “I owe them something I can never repay because I am White.” She knows that she has an unhealthy level of guilt, but does not seem to be able to move beyond that.*

Individuals in this phase will intentionally seek out living, working or life situations where they can have many deep relationships where they are in a minority culture. This allows individuals to *heal heart-level issues of their own ethnocentrism*. One key aspect for this stage to be most effective is that the individual needs to be in a power dynamic either as a peer or where the minority group holds most of the power. This stage is most often only encountered by Christians who work in either the urban or foreign “missions field.” This is because very few individuals from a majority culture will choose to live in a minority culture because it can be a challenging and painful transition. Individuals in this stage will often have disproportionate guilt and will often appease the minority group rather than challenge it even when the challenges are legitimate.

It is worth stating that an individual may be of one race and be raised in a different culture from their early childhood. An example might be a third generation Asian American who was raised in an almost all-White environment and whose family was primarily majority culture because her grandparents assimilated into White culture. For these individuals immersion within their racial group may not be as essential for their personal growth to get in touch with “who they are.” In fact, for these individuals immersion could involve much wounding from their own racial group for failing to understand that an individual’s cultural upbringing (and who they really are inside) may not match their race. These individuals will often receive challenges from individuals in their own cultural group who wrongly assume they are stuck in Stage 1 or 2 since they do not embrace their racial heritage. So while immersion for these individuals may not be helpful for “getting in touch with who they are,” it may be helpful for getting in touch with how they are perceived by others. For example, while an individual may not strongly “feel” Asian-American, others will often perceive them that way based on their race. Because of this, these individuals will experience much of the same racism that others of their race experience. It is for this reason of healing the effects of racism that it is helpful for these individuals to still embrace the immersion process. Unfortunately few of these individuals pursue this path because the criticisms that they feel within their own race can be an overwhelming barrier.

**Stage 4: Holiness.** In this phase, the individual will have a solid ethnic identity from their own heritage, but will also transcend their culture to work against oppression of all kinds. Individuals in this stage can identify with both the oppressed and the oppressor and will appropriately challenge all forms of injustice including oppression across race, ethnicity, class, gender, nationality and culture. Individuals in this stage will defy categorization by building on their own cultural heritage while learning to adopt the strengths of other cultural groups.

**Minority Experience in the Holiness Stage**

*Example. An African American man still strongly identifies with his African American heritage, but has found significant release from past anger and bitterness caused by the effects of racism. He still attends a Black church, but is actively working to reach out to people of other racial backgrounds. When he encounters racism or injustice he will continue to take a stand, but does not react with such strong anger as he has in the past, and when he does feel this anger, he has learned to direct it constructively. He has integrated both his own cultural heritage, but also strengths from other cultures and is not afraid to use tools and methods of following Jesus from those cultures. Many other African Americans in his church often say that they cannot “figure him out” because he seems like he is “really Black,” but every now and then he surprises his Black friends by standing up for White individuals in situations they do not agree with and he often seems too focused on racial reconciliation. Some of his more radical Black friends may call him an “Uncle Tom” and accuse him of not being “really Black.” At times he may feel unable to fully fit in with either community, but understands that this is a part of his calling as a bridge-builder. A more popular example is Martin Luther King, Jr.*

Individuals at this stage are secure in their own ethnic identity, and intentionally choose to reengage in deep relationships with healthy individuals of the majority cultural group. This allows them to integrate the strengths of that group and to continue the forgiveness process. As they are healed, they will be able to extend more grace and not continually show a disproportional response of anger to racial offences. They will seek out more relationships with people from other cultures while unapologetically embracing their own culture.

Individuals who are in this stage are often wrongfully accused of being in stage 2 (usually by those in stage 3). This is because these individuals are able to understand and challenge both minority and majority cultural views. When they side with the majority culture, it may seem to some that they are still in stage 2 because they do not always side with the opinion of their own minority group. Two good examples of this are Martin Luther King, Jr. and Malcolm X later in life after he had been through a forgiveness process. Because of this misperception, individuals in this stage who continue to attend an ethnically focused church within their own ethnic group may experience some abuse within their own ethnic group.

**Majority Experience in the Holiness Stage**

*Example. A White woman who spent several years working in an African American ministry may find herself re-engaging with the White community after going through a period with very few White friends. She still spends much of her life in an African American context, because that is what she feels God has called her to, but she no longer tries to “act Black” to fit in. She recognizes her cultural limitations, but also understands that God has called her to serve as a “bridge-builder” between White and Black communities. Rather than putting all of her energy into directly serving those experiencing racism and other forms of injustice, she also finds herself putting more of her energy in bringing healing to broken cultural tendencies in the majority culture that cause injustice. She has integrated both the strengths of her own cultural heritage as well as the strengths she learned from living in a Black community, and she is comfortable using methods and tools of following Jesus from both communities. She no longer feels that she needs to apologize to every person of color just because she is White. Neither Black nor White individuals can “figure her out.” To the Black community she seems like a White person who “gets it” on being able to see racial issues, but she will surprise them by standing out against specific cases of injustice experienced by White individuals. To the White community, she seems “healthy” but she can often get angry when they do not respond to the injustice that exists. Because of this, she often will feel unable to fully fit in with either community, but understands that this is a part of her calling as a bridge-builder.*

Individuals at this stage will have integrated the strengths of a minority group and will be re-integrating the strengths of their own majority culture while continuing the forgiveness process. As they are healed, this group will no longer feel guilt for past cultural wrongs either caused by themselves or by the majority group. This group will also extend greater grace to those from minority cultures that are angry from past cultural abuse, but they will gently stand against all forms of oppression. Individuals at this phase will often be accused of being racists (often by those in stage 3) when they stand up against injustice against majority culture individuals or if they stand secure in their own ethnic identity.

Table 2. Summary of the Ethnic Identity Development Process

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Description** | **Goal** | **Examples** |
| **Stage 1. Unawareness** | Unaware of racial and social identity. | Become aware of racial/social identity | Minority: Very young black child  Majority: “I don’t have a culture” |
| **Stage 2. Awareness** | Growing awareness of race, culture and racism, but most processing is on a head-level | Become aware of racism and other forms of social injustice to provide basis for entering immersion | Minority: A Latino teen trying to act White  Majority: Intellectual liberal |
| **Stage 3. Immersion** | Immersion and identification with minority culture | Process on an emotional level and heal the effects of racism and social brokenness through action, relationships and forgiveness | Minority: Malcolm X  Majority: Guilt-filled White woman in a Black church |
| **Stage 4. Holiness** | Secure, consistent racial/ social identity while integrating strengths from other cultures | Continue reconciliation by addressing social injustice, bringing social healing and addressing personal cultural brokenness | Minority: Martin Luther King, Jr.  Majority: Healthy White social activist |

**Racism, Personal Growth and Social Healing**

It is worth commenting more about racism. A common definition used for ***racism* is an injustice that involves both prejudice and power.** This definition is helpful in that it recognizes that people of all racial backgrounds will have prejudices, but those prejudices are especially damaging when the person who holds them is in a position of power. Largely because of past injustices, much of the power in American society is held by White individuals, which creates much more potential for racism from White individuals. For example, if a Latino employee has a prejudice against his White boss and gets angry, he may vent his rage at his boss, but if his White boss gets angry at him because of a prejudice, then he has the power to fire the Latino individual (which would be racism).

There are three primary forms of racism: personal, institutional and cultural. Majority culture individuals most often are familiar with ***overt personal racism***, like someone saying a racial slur or individual hate crimes. Even the term “prejudice” is often interpreted as conscious attitudes, but it can also include unconscious, heart-level feelings of prejudice towards groups of people. Psychology calls these heart-level prejudices “transferences” because we “transfer” our feelings that we have about one person or a group onto another person, such as feeling anger or fear toward a particular racial group, which may unconsciously influence our actions. An example of ***institutional racism*** might include racial profiling done by police officers, where Black individuals may be disproportionately pulled over in their car for no offense other than “driving while Black.” Another example is that Black men will often experience discrimination in the job market, not only for overt racist reasons but also because of more unconscious fears that many managers have about hiring an “angry minority.” The book, *Divided by Faith* (by Emerson and Smith) reveals many of these institutional racist tendencies both within churches and the larger society. ***Cultural racism*** is imposing one group’s culturally relative values onto another group. This can be done by an individual who has ethnocentric tendencies or by a group that assimilates away Godly cultural heritage from other groups and individuals. These different forms of racism all could be viewed as a “generational curse” that gets passed down between generations by our families and society as part of the historical legacy of racism.

This definition of racism involving prejudice plus power is often hard for majority culture individuals to accept, but it is a helpful definition to use because it emphasizes that the injustice caused by prejudice is magnified by the power dynamic. A Black individual may have prejudice against a White individual that causes them to act unjustly toward that person, but unless the Black individual is in a position of power over the White individual, the injustice is prejudice rather than racism. Regardless of these debates over words, it is pretty clear that racial hatred and racial unforgiveness can go in any direction, but there can be a significant difference in impact if it comes from the majority culture group that holds the power.

The danger in talking about racial hatred or racial unforgiveness from minority cultural groups is that when any racial conflict comes up the majority culture individual will conclude that it was the result of racial hatred. The problem with this is that very often majority culture individuals will have blind spots where they commit a significant offense without knowing it, and will never learn the reasons why others were offended if they conclude that it was just the result of racial unforgiveness. For the most part, those coming from a majority culture who are just beginning their ethnic identity development (stage 1 or 2) cannot discern whether someone being offended and getting “too angry” is the result of racial unforgiveness or the result of the majority culture individual’s own blind spot. For example, a White individual might tell her Latina friend that her parents are “messed up” because of their concern for her and that her closeness with her family is unhealthy. If the Latina individual gets really angry at this comment, the White individual might conclude that her anger is the result of racial unforgiveness, whereas in reality, the comment was actually the result of “blind spots” (ignorance of the Latina’s life, family and cultural experience). The level of anger may have been proportionate to the offence and clearly not a case of personal racism of disproportionate anger, nor a case of trying to impose Latino culture on the White person.

It is helpful to understand the tendencies that individuals have in reacting to cultural conflict depend on the stage they are experiencing in their ethnic identity development process. The table above summarizes the different responses and the step of growth in the social healing process that individuals can take in their understanding of racism to get to the next step.

Table 3. Responses to Cultural Conflict

|  |  |  |
| --- | --- | --- |
|  | **Majority Culture** | **Minority Culture** |
| **Stage 1.**  **Unawareness** | **Tendency:** accuse other side of reverse racism while failing to acknowledge any part in offense.  **Growth:**  avoid reverse racism defense and acknowledge racial differences and racism. | **Tendency:** does not recognize that offence is a racial offence.  **Growth:**  acknowledge racial differences and racism. |
| **Stage 2.**  **Awareness** | **Tendency:** acknowledge conflict is from a cultural difference, but still accuse others of racial unforgiveness  **Growth:**  avoid defensiveness and understand and challenge institutional and heart-level racism. | **Tendency:** will conform and accept most racism without recognizing or challenging it.  **Growth:**  acknowledge and racism and heart-level wounds caused by it. |
| **Stage 3.**  **Immersion** | **Tendency:** take blame for nearly all racial conflict, and will openly confront others of racism.  **Growth:**  to root out one’s own racism and begin to receive forgiveness for one’s racism and acknowledge racial hatred/unforgiveness harming one’s self. | **Tendency:** guarded response to any racial offense, will not repent of own racial unforgiveness, desire to surround one’s self with symbols of minority ethnic community.  **Growth:**  name and forgive racial offenses and acknowledge all forms of oppression. |
| **Stage 4.**  **Holiness** | **Tendency:** will challenge all forms of oppression based at a level appropriate to the situation.  **Growth:**  learn to appropriately challenge all forms of oppression | **Tendency:** will challenge all forms of oppression based at a level appropriate to the situation.  **Growth:**  learn to appropriately challenge all forms of oppression |

It is worth stating that the ethnic identity development process is not entirely a linear process. An individual may be primarily embracing their ethnic identity in stage 3 in immersion, while also doing work on stage 4 forgiveness, while still often fighting the shame that comes from stage 2. Another example might be an adult who may be primarily in stage 4, but encounters racial discrimination in the real estate market or the workplace, and may experience stage 3 again. In fact, many individuals will have compartmentalized (non-integrated) aspects of their life where they will live in different stages. For example, many individuals may be in stage 3 when they are with their family, but in stage 2 when they are in their church or at work, as mentioned in one of the examples. It is helpful to view it as a progressive process in that individuals will have the majority of their focus in a particular stage, and as the “stage of focus” changes to later stages the individual is experiencing growth. **As an individual experiences more of their life in the later stages of the ethnic identity development process they are experiencing personal growth.**

It is also worth stating that some majority culture Christians (regardless of race) will have at least some parts of themselves where they will need to be integrated through the minority process. This is because in the process of becoming a Christian and being transformed, almost everyone will lose parts of their culture which were Godly and will later need to be reclaimed.

For most people this integrating process represents a pendulum where we may go from one extreme to another early in the healing process depending on the environment we are in, but later the variations between the “two sides” become much less until we are able to be consistent in who we are in all environments. For example, a new Christian in a college fellowship might be very “Christian” among their college friends, but still “party” and live out her previous lifestyle when with her old friends from high school. As she grows, she finds herself bringing much more of the healthy aspects of her “old self” with her Christian friends, and does not feel the need to hide her Christian beliefs and behaviors from her non-Christian friends. For those coming from the majority culture, understanding this integration in terms of an ethnic identity process is helpful to be able to have a better understanding of the process that minority culture individuals go through. This is not to say that majority culture individuals can know what it feels like to have lived as an individual of a minority race in the US, but it does provide a glimpse of the depth of pain that most individuals of a minority race experience.

**Social Healing Across Race, Class and Gender**

While the examples above focus on racial/ethnic identity development, it is also important for people to grow in social healing across class and gender. All of these areas (race, ethnicity, class and gender) are a part of social healing, which is a process where people grow in how their identity relates to different social groups (psychologists call this social identity development). Many Christians only deal with identity development on an individual perspective, which leaves out understanding for our group role in the global Body of Christ and the rest of the world. For example, many Christian groups that do address gender issues often only deal with them from a individual, interpersonal perspective, but do not use a collective framework that addresses systemic and cultural issues related to gender. The diagram below shows how social healing combines the individual and collective perspectives with both the head and heart perspectives to bring true healing. Many Christians remain stuck in the individual head perspective on race, class and gender. Recently there has been a push from this over-rational perspective and a push in many churches for pursuing emotional healing. As these churches approach race, class and gender they are still stuck in the individual perspective. Neither of these perspectives provide the social identity process that is needed to understand our roles in addressing unjust systems and cultural brokenness that perpetuate group oppression.

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While there are very different aspects for racial identity, ethnic identity, class identity and gender identity development, there are also some common aspects of the process. People in each of these groups start out with an unawareness of social roles related to their group identity (Unawareness). In each of these categories there are groups that have more power and those with less power, which can lead to oppression. Then individuals experiencing oppression often will internalize this as shame and accepting a false identity that is less than God intended (Awareness). Later once there once the oppression is identified, individuals will often go through a significant anger phase of rejecting the false identity and embracing the positive aspects of their group identity (Immersion). Finally, the individual learns to embrace unique social identity while integrating strengths from other groups and challenging all forms of oppression based at a level appropriate to the situation (Holiness). It is important to recognize that, these are all part of a group forgiveness process of experiencing oppression, naming the oppression and experiencing righteous anger, and forgiving while continuing to work to address oppression. The following chart shows steps in the social healing process across race/ethnicity, class and gender.

**Social Healing Across Race, Class and Gender**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Race/Ethnicity** | | **Gender** | | **Class** | |
| **Majority** | **Minority** | **Male** | **Female** | **Upper/Middle** | **Lower** |
| **Stage 1: Unawareness** | Unaware of racial/ethnic identity. | Unaware of racial/ethnic identity. | Unaware of gender roles. | Unaware of gender roles. | Unaware of class identity. | Unaware of class identity. |
| **Stage 2:**  **Awareness (immersion with dominant group)** | Growing awareness of race and racism, but most processing is on a head-level | Growing awareness of race and racism, but most processing is on a head-level | Embraces stereotypes or gender roles. | Embraces stereotypes or gender roles. | Growing awareness of economic oppression and classism but most processing is on a head-level | Become immersed in middle/upper class world (often through college) Become aware of class background but develops upwardly mobile class identity rejecting class background. |
| **Stage 3: Immersion (with non-dominant group)** | Immersion and identification with minority culture, Process on an emotional level and heal the effects of racism and social brokenness | Immersion and identification with minority culture, Process on an emotional level and heal the effects of racism and social brokenness | Understands limits of gender stereotypes and strengthens skills in “feminine” traits. | Challenges gender stereotypes, embraces anger against sexism and grows in “masculine” traits. | Embraces a downwardly mobile class identity, choosing to identify with the “poor” through immersion in a community in poverty. | Embraces class background as class identity and “moves back to the hood” through immersion in a community in poverty. |
| **Stage 4:**  **Holiness** | Embrace unique ethnic identity while integrating strengths from other cultures and challenging all forms of oppression based at a level appropriate to the situation. | Embrace unique ethnic identity while integrating strengths from other cultures and challenging all forms of oppression based at a level appropriate to the situation. | Live with showing strong masculine and feminine traits according to unique identity while embracing gender. Works to address sexism and bring healing of gender identity. | Live with showing strong masculine and feminine traits according to unique identity while embracing gender. Works address sexism and bring healing of gender identity. | Embraces unique class identity while integrating strengths from all class backgrounds and working to address classism and economic oppression while continuing to identify with the “poor.” | Embraces unique class identity while integrating strengths from all class backgrounds and working to address classism and economic oppression while continuing to identify with the “poor.” |

The overwhelming tendency for people of all backgrounds is to first focus on the parts of themselves that are in the oppressed group and where they have been hurt. Someone who is White from a low socioeconomic status or with a strong White ethnic group heritage (i.e. Irish or Italian) may first relate to how their group has been oppressed, but not be willing to embrace their “White” side which has oppressed others and still confers privilege. A middle class or upper class individual of a minority racial group may want to embrace the ways that they have experienced racism, but it will be much more difficult to embrace how they may have participated in classism either within their own racial group or across race. Men who experience racism and classism want to focus much more on those issues than on sexism. **Because of this, it is important for individuals to work to transcend their culture across race, ethnicity, class and gender.**

What is important for forgiveness to happen is that all individuals process both how they have been hurt and how they may have hurt others (even unknowingly). This is important to avoid continuing the cycle of oppression by being only able to identify as being oppressed. This is especially important to avoid continuing oppression within racial groups. An individual who has never learned to identify with being in the role of the “oppressor” may blindly oppress others especially within their racial group when they are in the position of power. This could involve assimilation of other ethnic groups within their racial group, classism, sexism or discrimination within their racial group based on ethnicity, language or skin color. This is especially important to think about in terms of “foreign missions” because US citizens of all racial backgrounds are nearly always in the position of power with respect to individuals in developing countries and will need to learn to relate in a healthy way from the perspective of having power.

**Relations Among Different Christian Cultural Groups**

In understanding how to develop healthy relations among cultural groups, it is also helpful to understand common misunderstandings. One of the major communication breakdowns between those from the majority culture and those from minority cultures happens primarily because of different cultural understandings of personal growth and what is psychologically “healthy.” The result is that generally an individual from one group shuts the other person down before a significant conversation can happen because the former does not see the latter as “healthy.”.

Quite possibly the most significant misunderstanding is between those in the majority group who are not racially aware (either in stage 1 or 2) and those having an “angry minority” response in stage 3. Those from the majority group embrace examples like Martin Luther King, Jr. as examples of what every minority should be (stage 4), but often fail to see that they themselves are in stage 1 or 2 in their own ethnic identity development. In general, those from the majority culture will completely shut down the angry minority individuals and refuse to talk with them until they are “healed” and can come from the stage 4 (MLK Jr.) perspective. This generally infuriates individuals of minority background who know that they themselves are racially aware (in stage 3), and the majority culture individual who is not racially aware (stage 1 or 2) is using their power to shut them down. For the minority culture individual, healing involves embracing stage 3 and naming the offenses so that they can forgive them. If the minority culture individual is shut down, they are likely to get angry because this will limit their own growth in the forgiveness process.

This misunderstanding is caused by the cultural differences in understanding what healing and growth looks like. **For the majority culture individual, healing and growth involves naming the offense and forgiving it.** The majority culture individual recognizes that the disproportionate anger shown in the stage 3 minority response is from bitterness and is something that needs to be healed, and so they will refuse to engage in a dialog. The majority culture individual feels justified in not responding to the disproportionate anger because the individual from a minority cultural background is “unhealthy.”

**For the individual coming from a minority background who has had significant experiences of racism, the primary healing process is the ethnic identity development process.** Because the wounds of racism are so deep for many minority culture individuals, healing comes primarily through an ethnic identity development process. A majority culture individual that is not very far in their ethnic identity development process is viewed as being “unhealthy” because they are not racially or culturally aware, which means that they have not learned to relate well to other cultures. From the minority cultural perspective, a majority culture individual in stage 1 or 2 of their ethnic identity process who shuts them down represents someone who is less healthy than them using the power they get from being the majority culture, which is a clear incident of racism. Often the majority culture individual fails to understand that part of the forgiveness process is often to name the offenses and have a period of anger, and that for individuals who have experienced a lifetime of racial abuse, this period may last for a while. To make this point of the role of anger in the development process, I have used the phrase, “To get to Martin Luther King, Jr., you often have to go through Malcolm X first.” This is not to justify any of the abuse that may happen from racial rage, but it is more to provide an understanding that going through a period of anger is an important part of the forgiveness process.

In reality, both sides have correct elements in their perspective—the majority culture group is being abusive by using their power to restrict the growth process of the minority culture individual, and the individual having an “angry minority” response does need to forgive. What both sides fail to recognize is that the perception of what healing and growth involves is different for the two groups. For majority culture individuals to respond in a healthy way to other cultures, they must become culturally aware by going through an ethnic identity development process. For minority culture individuals to find healing they must let go and forgive at a heart-level after getting in touch with anger in the immersion phase of the ethnic identity development process.

There are significant systemic reasons why it is hard for either majority culture or minority culture individuals to progress in their healing beyond these barriers. For those coming from the majority culture, the only way to really get heart-level change in the ethnic identity development process is to embrace the immersion stage. It is only after that step that majority culture individuals can find heart-level change in how they relate to other cultures and then finally reach integration. To enter immersion, individuals coming from a majority culture must choose to put a significant part of their lives in an environment where they become the minority culture for a while. Because the immersion stage can be very painful for individuals coming from a majority culture, many choose not to go through that pain even though it might bring growth.

One of the key barriers to minority culture individuals is that most of the foundation of ethnic identity development is rooted in a secular perspective which may have some differences from a Christian perspective. The secular perspective often proposes that a person is most healed when you are the most “Black” (or whatever your minority ethnic group). A Christian perspective would be that we are most healed when we are closest to God so that each of us reflects the image of God through our unique Godly cultural heritage. Another important distinction is that the secular perspective downplays the significance of forgiveness, which is a central truth of Christianity. Because of this, many individuals growing in their ethnic identity development get stuck in immersion unable to fully forgive to get to integration.

Often the best “tools” to enable forgiveness come from emotional healing and Christian counseling traditions, but minority culture individuals often have strong attitudes against emotional healing and counseling. While some of this is purely a cultural prejudice, in other ways this attitude is justified because almost all Christian emotional healing programs and materials come from an ethnocentric perspective. For minority culture individuals, pursuing emotional healing in that context represents a decision to assimilate, which could be viewed a step backward in healing from the ethnic identity development perspective. If they are fortunate, minority culture individuals might be able to locate a non-Christian counselor coming from a common ethnic background, but even that is missing the Christian perspective. While there are a few culturally relevant Christian emotional healing groups (like Arise), there is such a strong stigma associated with Christian emotional healing that it is perceived to take an assimilative approach to minority culture individuals that few actually pursue it (if they already strongly identify with their ethnic background). The result of this is that many individuals feel stuck and unable to forgive because they fail to seek tools of emotional healing that are often better at helping people process forgiveness.

Only individuals who have been through both an emotional healing process and an ethnic identity development process can really have a helpful dialog with both sides. This dialog almost never happens because there are very few individuals who have been willing to embrace the path of the other. The solution to this problem is to take the social healing approach which involves both pursuing emotional healing and embracing the ethnic identity development process. It is by following this path of social healing that we can become individuals who can dialog with both sides and become bridge-builders who can provide a safe environment for majority and minority cultural groups.

**Suggested Questions for Discussion**

1. Have a couple of people who may be a little farther along share their own cultural identity development process.
2. What has been your experience in ethnic and group identity development? What parts of the document did you connect with or have a strong response to?
3. Where do you feel like you are in the process? Feel free to list multiple stages.
4. What do you feel like God is calling you into for your own personal growth?

**About this Document and the Author**

This document provides a framework for reconciliation across race, ethnicity, class and gender by explaining how the ethnic identity development process can be used to not only bring social justice, but to also bring social healing. One of the most significant barriers to reconciliation and continued growth in God is often our prejudices toward the “tools” that other groups use in seeking God. We all have prejudices about many things (prejudice is defined as a judgment or opinion formed beforehand without knowledge of the facts). For example, we may not know what is meant by “ethnic identity development,” but we may unknowingly have a prejudice against it. As a White male, several years ago when I first heard the term “ethnic identity development,” my first response was to think it must be something that is only helpful to those who come from a minority racial background. Someone else may hear the term “emotional healing” and think that it is some psychological mumbo-jumbo for White yuppies. To have a helpful conversation about reconciliation, it will be helpful to put these types of judgments on hold. In writing on issues of race and reconciliation, it is extremely difficult to use language that does not hit on prejudices or offend someone, and it is even more difficult to use specific examples while avoiding stereotypes.

While I have found reading about ethnic identity development to be extremely helpful, the majority of my learning in this area has been through experience. Being a White male, my own experience in ethnic identity development has been primarily from a majority culture perspective in regards to race. However, my own experience of growing up in an inner-city, poor White environment has complicated my own process because it has given me a non-majority economic class background. In addition, a Black cultural influence was pervasive in my surrounding growing up. Also, having lived in the Black church community for much of my life, I have been able to view “from the outside” the experience of those coming from a minority racial background (of course, this does not mean that I know what that experience feels like for someone going through it).

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Frazier, S. T. (2001). *Check All That Apply: Finding Wholeness as a Multiracial Person* (Print On Demand edition.). Downers Grove, Ill: IVP Books.

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Perkins, S., & Rice, C. (2000). *More than equals: racial healing for the sake of the gospel*. Downers Grove, Ill.: InterVarsity Press.

Rice, C. (2002). *Grace matters: a true story of race, friendship, and faith in the heart of the South*. San Francisco, CA: Jossey-Bass.

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### MTM 501: Theology of Technology (developed by John Edmiston)



**MTM 501**

**Theology of Technology Syllabus**

**School of Science, Technology, Society and Ministry**

**Mission Statement**  
To educate and equip others to spread the gospel of Jesus Christ and to meet human needs in His name through technology in both lay and professional ministry contexts.

Instructor: John Edmiston

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**Course Description**

Theology of Technology introduces students to the biblical and theological basis for a Christian theology of technology and to the concepts essential to the reflective life and practice of the Christian technologist.

Program Outcomes

At the conclusion of their MTM program, the student will able to:

1. Develop effective technology initiatives in a way that takes into account the unique cultures they will be serving and how to use technology to serve the poor.
2. Understand the Biblical basis, theology and historical context of technology and how to apply that in professional and ministry settings.
3. Understand the Christian vocation of Science, Technology, Engineering and Math careers and their unique identity and role within their field in a way that maximizes their calling and enables Christian ministry 24/7.
4. Understand complex systems in a way that helps them to effectively lead others and apply technology in ministry and professional environments.
5. Understand some of the limits of technology and how to counter some of the negative implications of technology and its effect on relationships and creation of new addictions.
6. Develop effective technology ministry strategies for developing sustainable initiatives by monitoring and understanding the latest theories, trends, tools and opportunities in technology in ministry

Course 501 helps students introduces students to the biblical and theological basis for a Christian theology of technology and to the concepts essential to the reflective life and practice of the Christian technologist in order to meet program outcomes 1, 2, 3 and 5 above.

**Course Objectives**

1. Reflectively apply a coherent biblical and theological view of technology to a range of present and emerging ministry situations.
2. Clearly evaluate, articulate and address the ethical dilemmas involved in the use of technology.
3. Understand and articulate your unique identity as a technologist and the unique role played by technologists in the Body of Christ
4. Demonstrate a grasp of the biblical history of technology and how it shapes both human consciousness and social and cultural practices including both true and false worship, idolatry and true spiritual imagination.
5. Communicate a clear vision for the use of technology in areas such as the development of Christian character, spiritual values and service to the urban poor.

**Expectations**

1. This course requires **extensive engagement** with the readings, the instructor and with other students.

2. **Careful pacing and scheduling** will be required and it is the task of the student to keep up with the work.

3. You will need good high-speed **Internet access and word-processing software** such as Microsoft Word or OpenOffice.

4. You will be expected to have a **basic working understanding** of digital technology and the Internet.

5. All posting in forums will be done in a **spirit of Christian love**, though vigorous debate is encouraged.

6. This course is meant to **challenge your intellectual and spiritual boundaries** and you are not expected to agree with all the materials presented but rather to interact with it in a scholarly manner as reflective practitioners.

7. This is a THEOLOGY course so your posts and assignments should take on a **theological tone** (not a devotional tone or a purely secular analysis) and be well supported with references from biblical or other theological sources.

8. Major written work is expected to **reference and to interact** **with:**  
 a) All three (3) of the required texts as well as the Scriptures.  
b) At least six (6) of the recommended texts   
c) The class readings and videos, MP3s etc.

**Practical Theology**  
This course is classified mainly as a course in Practical Theology with some reference to Systematic Theology. Practical theology is the practical application of theology to everyday life. Richard Osmer explains that the four key questions and tasks in practical theology are:

What is going on? (descriptive-empirical task)

Why is this going on? (interpretative task)

What ought to be going on? (normative task)

How might we respond? (pragmatic task)  
These are the questions we will be expecting you to ask as you think through the material in this course and should form the basis of your reflection in the forums and of your writing tasks.

**Pre-Reading For Those Without Theology Majors**

Glossary of Theological Terms (Roman Catholic): <http://www.kencollins.com/glossary/theology.htm>   
Glossary of Theological Terms (Protestant) : <http://eternalsecurity.us/biblical_theology_glossary.htm>   
Wikipedia article on Christian Theology: <http://en.wikipedia.org/wiki/Christian_theology>

**Required Texts**

Dyer, John 2011 *From the Garden to the City: The Redeeming and Corrupting Power of Technology*, Kregel Publications, 2011

Dawson, Lorne L. (ed.) Cowan, Douglas E. (ed) 2004. *Religion Online: Finding Faith on the Internet* . New York, Routledge

Challies, Tim. *The Next Story: Life and Faith after the Digital Explosion*. (Kindle Edition)

The Holy Bible (NKJV, NRSV or NASB versions preferred as they better support scholarly exegesis)

**Recommended Texts and Videos**

Dawson, Lorne L. (ed.) Cowan, Douglas E. (ed) 2004. *Religion Online: Finding Faith on the Internet.* New York, Routledge

Miller, M. Rex. 2004 *The Millennium Matrix*, San Francisco, Jossey-Bass (A Wiley Imprint)

Suler, John. *The Psychology of Cyberspace*. PhD Department of Psychology, Science and Technology Center, Rider University. Download from: <http://www.internetevangelismday.com/free-christian-ebook-downloads.php>

Rojcewicz, Richard. *The Gods and Technology: A Reading of Heidegge*r (Suny Series in Theology and Continental Thought).

Zukowski, Angela Ann; Babin Pierre. 2002 . *The Gospel in Cyberspace: Nurturing Faith in the Internet Age* . Chicago: Loyola Press

de Chardin, Pierre Teilhard. *The Divine Milieu*. Perennial Classics: 2001.

de Chardin, Pierre Teilhard. *The Future of Man*.

Pattison, George. *Thinking About God in an Age of Technology*.

Cole-Turner, Ronald. *Transhumanism and Transcendence: Christian Hope in an Age of Technological Enhancement* [Kindle Edition] (Author, Editor)

Dickerson, Matthew. *Mind and the Machine - What It Means to Be Human and Why It Matters*. Brazos Press, (available free on Kindle)

Vinge, Verner. “On The Singularity” (speaking to Google staff) Video - 1hr 10 mins <http://www.youtube.com/watch?v=RzRuPGnJxCs>

Carr, Nicolas. *The Shallows: What the Internet is Doing to Our Brains* (NewYork: W. W. Norton & Company, 2010). 276 pp.

Shirky, Clay. *Cognitive Surplus* (New York: Penguin Press, 2010). 242 pp.

Banks, Robert and Stevens, Paul *The Complete Book of Everyday Christianity.* 1997

**Course Outline**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Period** | | **Assessments** | | **Due**  **Date** | **Esthrs** | **Weight** | **Objective #’s** |
| **Weeks 1-2** | **THEME: CREATION & PURPOSE OF TECHNOLOGY, BIBLICAL AND THEOLOGICAL FOUNDATIONS**  **Read** | | |  | 18 | -- |  |
|  | **Listen/View** | | |  | 3 | -- |  |
|  | Forum #1a - Technology & Morality. | | |  | 3 | 4% | 1,2,4 |
|  | Forum #1b - Biblical Examples. | | |  | 3 | 4% | 1,3,4 |
|  | Commence planning and outlining for two minor projects and major project | | |  | 2 |  |  |
| **Weeks 3-4** | | **THEME: THE FALL & PROBLEMS WITH TECHNOLOGY**  **Read** | |  | 16 | -- |  |
|  | | **Listen/View** | |  | 3 |  |  |
|  | | Forum #2a Technology & Idolatry. | |  | 3 | 4% | 1,2,3,4 |
|  | | Forum #2b Transhumanism. | |  | 3 | 4% | 1,2 |
|  | | Minor Project #1. – Christian Technological Ethics. | |  | 10 | 10% | 1,3,5 |
| **Weeks 5-6** | | | **THEME: THE REDEMPTION OF TECHNOLOGY**  **Read** |  | 16 | -- |  |
|  | | | **Listen/View** |  | 3 | -- |  |
|  | | | Forum #3a Technology for Christian Love. |  | 3 | 4% | 2,4,5 |
|  | | | Forum #3b Technology to Serve the Needy. |  | 3 | 4% | 2,4.5 |
|  | | | Minor Project #2 Ideal Christian Technologist. |  | 10 | 15% | 2,3,4,5 |
| **Weeks 7-8** | | **THE APPLICATION OF TECHNOLOGY IN THE KINGDOM OF GOD**  **Read** | |  | 10 | -- |  |
|  | | **Listen/View** | |  | 3 | -- |  |
|  | | Forum #4a Digital Strategy Analysis. | |  | 3 | 4% | 1,3,4,5, |
|  | | Forum #4b Technology’s Future. | |  | 3 | 4% | 3,4,5 |
|  | | Major Project #1. Applied Theology of Technology. | |  | 17 | 43% | 1,2,3,4,5 |
| Overall | | Total estimated hours based upon 17 hours per week for 8 weeks | |  | 135 | 100% |  |

**Estimated Activities and Times**

* Reading is measured at reading 25 textbook pages per hour and reading 20 journal pages per hour Total reading for this course is 60 hours.
* Listening to recorded audio/video elements or live sessions (in-class equivalent) - 12.00 hours
* Discussion (in-class equivalent) - 24 hours
* Written projects - 39.00 hours

**Course Content**

**Week 1-2**

**Read:**

From The Garden To The City (chapters 1-4) by John Dyer  
  
The Next Story: Life and Faith after the Digital Explosion by Tim Challies (Chapters 1-3)

Technology In The Bible  
<http://wikichristian.org/index.php/Technology_in_the_Bible>  
(if this link fails to work, go to wikichristian.org and type “technology in the Bible” into the search box on the right and the article will come up)

Biblical References To Technology  
<http://wikichristian.org/index.php/Biblical_references_to_technology>

(if this link fails to work, go to wikichristian.org and type “biblical references to technology” into the search box on the right and the article will come up)

From Cosmism To Deism:

<http://www.kurzweilai.net/from-cosmism-to-deism>

The Next Digital Decade - Read Chapter one (both essays)

<http://nextdigitaldecade.com/contents>

Towards A Theology of Technology (PowerPoint)

by John Edmiston   
<http://cybermissions.org/articles/iccm/Theology_Technology_iccm_2007.ppt>

**Listen/View:**

Introduction: Theology of Technology Course slideshare (30 minutes)  
<http://cybermissions.org/articles/cityvision/Theology_of_Technology_Course_Explanation.pptx>

What Is Theology? Course (John Edmiston) PowerPoint narrated slideshare (45 minutes)

<http://cybermissions.org/articles/cityvision/What_Is_Theology.pptx>

Major Issues In A Theology of Technology Course narrated slideshare (60 minutes)  
<http://cybermissions.org/articles/cityvision/Major_Issues_In_A_Theology_of_Technology.pptx>

A Few Questions About A Theology Of The Internet (MP3)  
<http://cybermissions.org/audio/wk_2_theology_technology.mp3>

A Theology of Technology Media for Coders and Artists by John Dyer (one hour)  
<http://www.youtube.com/watch?v=yQ4sgYN8bx8>

**Forum #1a - Technology & Morality.** Analyze and evaluate the relationship between technology and religion. Is technology spiritually neutral?

**Forum #1b - Biblical Examples.** Discuss one of the biblical examples of Noah *or* Bezalel *or* Solomon as Christian technologists.

**Quiz 1**

**Week 3-4**

**Read:**

From The Garden To The City (chapters 5-7) by John Dyer  
  
The Next Story: Life and Faith after the Digital Explosion by Tim Challies (Chapters 4 & 5)

Me, Myself and My iPhone:  
<http://www.worldmag.com/2008/07/me_myself_and_iphone>

Cybertheology: What Would Jesus Hack?  
<http://www.economist.com/node/21527031>

Our Gadgets, Our Pope: The Church Embraces The Cult of Technology  
[http://www.theatlantic.com/technology/archive/2011/04/our-gadgets-our-pope-the-church-embraces-the-cult-of-technology/237057/#](http://www.theatlantic.com/technology/archive/2011/04/our-gadgets-our-pope-the-church-embraces-the-cult-of-technology/237057/)

Infographic: The Psychology of Our Obsession With Social Media  
<http://www.tinacook.tv/socialmedia/infographic/psychology-of-our-obsession-with-social-media/>

**Listen/View:**

Expanding The Bandwidth of Discipleship by Joanne Jung   
<http://www.youtube.com/watch?v=mItkp5fJm74&feature=edu&list=PLE3DAC3152BD5DCBC>

The Coming Singularity by Verner Vinge (podcast)  
<http://digitalvillage.org/audio/dv12112401.mp3>

How To Become Social Media Savvy Without Losing Your Soul by Brent McCracken   
<http://www.youtube.com/watch?v=g0fGGpYzzD0&feature=edu&list=PLE3DAC3152BD5DCBC>

**Forum #2a Technology & Idolatry.** What is the relationship between technology and idolatry? How does technology tend to shape our spiritual imagination?

**Forum #2b Transhumanism.** What do you think about ideas such the Singularity, post-humanism and machine-human relations as possible spiritual issues?

**Minor Project #1. – Christian Technological Ethics.** Clearly articulate, address and attempt to resolve at least two major ethical dilemmas involved in the Christian use of technology. For instance the tension between life-enhancing technology (e.g. an artificial limb) and invasive life-form-altering technology (replacing the neo-cortex with a computer chip) or the proper and improper use of virtual worlds / virtual reality. (4 pages)

**Week 5-6**

**Read:**

From The Garden To The City (chapters 8-9) by John Dyer  
  
The Next Story: Life and Faith after the Digital Explosion by Tim Challies (Chapters 6&7)

**Listen/View:**

The Ubiquitous Gospel - by John Edmiston

<http://www.anymeeting.com/johnedmiston/EC53DA87894B>

The Visual Digital Age by Clyde Taber

<http://www.youtube.com/watch?v=8T5BOP5J3U8&feature=edu&list=PLE3DAC3152BD5DCBC>

Positive Effects of Social Media In Education  
<http://www.youtube.com/watch?v=oq0vrM6P_Is>

Ken Bringas - How Technology Impacts The Local Church (interviewed by John Edmiston)  
<https://www.youtube.com/watch?v=BhQqULkuUR4>

**Forum #3a Technology for Christian Love.** Explain how can technology be made into a useful means for the appropriate expression of Christian agape love?

**Forum #3b Technology to Serve the Needy.** How can technology be directly and intentionally applied to serve ONE of the following four groups:   
A) the marginalized   
B)the disabled  
C)the urban poor  
D) those in extremely remote and information-poor communities

**Minor Project #2 Ideal Christian Technologist**. How would you describe the ideal characteristics of a Christian technologist? Also how is technology part of your personal human development and your spiritual development? This may include issues such as how technology is part of your stewardship and due diligence as a Christian communicator in the C21st, how Christ and Christian ethics inform appropriate software and hardware development, how it augments or detracts from your knowledge of the gospel and of Christ, technology as distraction etc.(6 pages)

**Week 7-8**

**Read:**

From The Garden To The City (chapters 10-11 + appendices) by John Dyer

The Next Story: Life and Faith after the Digital Explosion by Tim Challies (Chapters 8,9 and Epilogue)

Tomi Ahonen: Android Won, Windows Lost (future of mobile technology) <http://communities-dominate.blogs.com/brands/2012/12/android-won-windows-lost-now-what-the-battle-of-the-century-is-decided-microsoft-relegated-to-ever-s.html>

**Listen/View:**

The Next Twenty Years by John Edmiston   
<http://www.youtube.com/watch?v=RHC9wcxQpQU&feature=edu&list=PLE3DAC3152BD5DCBC>

Eric Schmidt: The Future of Technology (talk at Princeton)  
<http://www.youtube.com/watch?v=x6Xog5HyIY8>

More On A Theology of Technology (John Dyer being interviewed by John Edmiston)  
<http://youtu.be/yyN0H7nRPHM>

**Forum #4a Digital Strategy Analysis.** Pick a digital strategy currently being deployed and evaluate how “well-thought-through” it is from a biblical perspective.

**Forum #4b Technology’s Future.** Analyze some of the long-term future possibilities for technology in the service of the Kingdom of God.

**Major Project #1. Applied Theology of Technology**.   
a) Develop and elucidate your own personal theology of technology,

b) Then using the questions from the Technology Tetrad in the Appendix of From the Garden to the City as a framework:

- Apply this to an organization. i.e. theology of technology for your church, college, ministry, etc.

- OR apply this to a new technology. i.e. theology of technology applied to smartphones, mobile, blogging, online education, etc.

- OR apply this to a particular people group. i.e. the poor, developing countries, women, men, Latinos, etc. (15pages)

### MTM 502: Organizational Systems (developed by Jay Gary)



MTM 502

Organizational Systems Syllabus

**School of Science, Technology, and Ministry**

Instructor: Jay E. Gary, PhD

Email: jgary@cityvision.edu

Phone: (757) 287-5055

Course Description

Students are introduced to systems theory to see the world in terms of interconnected patterns that constitute human, technical and natural systems, and to learn how to reinforce or change these systems appropriately. Students focus on a technology-focused organization to document their interconnected systems such as goals, strategy, environments, structures, processes and people. They map the alignment of these subsystems in order to consider leverage points for improvement, especially in respect to power dynamics, funding, or organizational communications.

Theme Scripture

From Him the whole body, joined and held together by every supporting ligament, grows and builds itself up in love, as each part does its work (Ephesians 4:16).

Program Outcomes

At the conclusion of their MTM program, the student will able to:

Develop effective technology initiatives in a way that takes into account the unique cultures they will be serving and how to use technology to serve the poor.

Understand the Biblical basis, theology and historical context of technology and how to apply that in professional and ministry settings.

Understand the Christian vocation of Science, Technology, Engineering and Math careers and their unique identity and role within their field in a way that maximizes their calling and enables Christian ministry 24/7.

Understand complex systems in a way that helps them to effectively lead others and apply technology in ministry and professional environments.

Understand some of the limits of technology and how counter some of the negative implications of technology and its effect on relationships and creation of new addictions.

MTM 502 helps students understand complex systems in order to meet program outcomes 2 and 4 above.

Course Objectives

The learning objectives of this course are based on the MTM program goals above and will develop the following student competencies:

SYSTEMS: Explore the world as living systems, comprised of interacting parts, drawn from natural, human, technical domains.

MAPPING: Use systems thinking to map the goals, strategy, and environment of a selected organization.

DESIGN: Use systems thinking to examine the current design of structure, process and people systems of a technology organization.

DYNAMICS: Use systems thinking to create an Organizational Design report for a technology-focused organization.

Each course assignment is tied to one of these four objectives, as listed in the right column of the Course Outline table below.

A Note from the Instructor

This is an applied course in systems thinking, acting and influencing! You will learn how to see those invisible patterns that interconnect all things, and value the personal relationships that can change them. The backbone of this course is a 6-week consulting project that you start in Period 2 and complete in Period 4 in your Major project.

This will require to you focus on an existing mid-sized technology-focused organization, to study how their structures, processes and people fit together and how they might be improved. This does not refer to a start-up organization you or a friend wants to create. Your project should engage an established organization. This can be a non-profit, profit or public organization. It should involve an organization or department with at least 12 or more employees (an annual budget of $3 million or more). If you come up empty with ideas, tap into your social network for referrals. Ask “who can refer me to a mid-size organization that would welcome me to take a fresh look at improving their strategy, structure and processes?”

Reach out now to gain approval from a manager you know, or one you can get access to. This can be within your organization or a client organization. Have that manager sponsor your work, with occasional email and phone contact at the least, and Skype/face-to-face contact at the most, in an agreed upon arrangement to support your organizational design assignments (Minor 2, 3, & Major 1). The commitment from the manager should be no more than 2-5 hours of feedback across Period 2-4 of this course. Assure the manager that you will not reveal any sensitive information about the organization, but work with obvious knowledge that any external Systems Design consultant might access to evaluate their organization.

As your instructor I will function as your senior consultant, rather than just a sage on the stage. I will coach you as an associate as you explore the systems that constitute your technology-focused organization. Given the applied nature of this course, we will schedule up to 4 live-class discussions through Google+. These meetings will be non-graded, but will help you with Dialogue and Projects. The sessions will be a mix between instructor previews of concepts/assignments, student discussion and assigned student presentations. These sessions will be archived for those who can make them and are required viewing.

Ultimately, this course is not to inform you, but to prepare you for the leadership roles you will assume 5, 10 and 15 after your MTM. You will learn how to go beyond thinking like a technician to becoming a systems actor that can build networks and ministries that bear fruit, 30, 60, 100 fold for years and decades to come. Becoming a steward of living systems at this level of a master builder will require you work hard in this course, on average 17 hours, or equal to two full-days a week. Early on you may feel like Peter who jumped out to walk on water, only to sink. But if you press through this by being faithful, and trust that the living God is holding your hand, I guarantee you that you will become a Christian social technologist who is a master builder.

Required Texts

These are required texts that every student should obtain.

Meadows, Donella. H., & Wright, Diana. (2008). *Thinking in systems: A primer.* White River Junction, VT: Chelsea Green. ISBN: 9781603580557 (available in Kindle also).

Steinke, P. L. (2006). How your church family works: Understanding congregations as emotional systems. Lanham, MD: Rowman & Littlefield. ISBN: 9781566993296 (available in Kindle also).

Burton, Richard M., Obel, Borge, & DeSanctis, Gerardin. (2011). *Organizational design: A step-by-step approach* (2nd ed.). New York: Cambridge University Press. ISBN: 9780521180238

Recommended Texts

These are optional resources for your minor and major projects. They further define the focus of this course. Reference them through your local library or interlibrary loan, either during or after the course.

Anderson, V., & Johnson, L. (1997). *Systems thinking basics: From concepts to causal loops*. Cambridge, MA: Pegasus. ISBN: 1883823129.

Axelrod, R. M., & Cohen, M. D. (1999). *Harnessing complexity: Organizational implications of a scientific frontier.* New York: Free Press. ISBN: 0684867176

Haines, S. G. (1998). *The manager's pocket guide to systems thinking and learning*. HRD Press. ISBN: 0-87425-453-1.

Hall, Douglas A., Hall, Judy, & Daman, Steve. (2010). *The cat & the toaster: Living system ministry in a technological age*. Eugene, OR: Wipf & Stock. ISBN: 9781608992706

Hatch, M. J., & Cunliffe, A. L. (2013). *Organizational theory: Modern, symbolic, and postmodern perspectives.* Oxford University Press. ISBN-13: 978-0199640379

Meadows, Donella, et al. (2004). *The limits to growth: The 30-year update*. Chelsea Green. ISBN: 1-931498-58-X.

Sterman, J. (2000). *Business dynamics: Systems thinking and modeling for a complex world*. Boston: Irwin/McGraw-Hill. ISBN: 0072311355.

Course Outline

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Period** | **Assessments** | **Due**  **Date** | **Est hrs** | **Weight** | **Object-ive #’s** |
| **1** | **Systems** | -- | -- | -- | -- |
| Weeks 1-2 | Read | -- | 13 | -- | -- |
| Aug 25-Sept 7 | Listen/View | -- | 2 | -- | -- |
|  | Forum #1a: The System Lens | Sept 7 | 3 | 4% | 1 |
|  | Forum #1b: Living System Ministry | Sept 7 | 3 | 4% | 1 |
|  | Minor Project #1: The Near Beer Game | Sept 7 | 6 | 5% | 1 |
| **2** | **Mapping** | -- | -- | -- | -- |
| Weeks 3-4 | Read | -- | 16 | -- | -- |
| Sept 8-21 | Listen/View | -- | 2 | -- | -- |
|  | Forum #2a: Organizational Design | Sept 21 | 3 | 4% | 2 |
|  | Forum #2b: System Practitioners | Sept 21 | 3 | 4% | 2 |
|  | Minor Project #2: Strategic Assessm. | Sept 21 | 11 | 15% | 1,2 |
| **3** | **Design** | -- | -- | -- | -- |
| Weeks 5-6 | Read | -- | 12 | -- | -- |
| Sept 22- Oct 5 | Listen/View Google+ Preview; Strategy Presentations | -- | 2 | -- | -- |
|  | Forum #3a: Organizational Structure | Oct 5 | 3 | 4% | 3 |
|  | Forum #3b: Process and People | Oct 5 | 3 | 4% | 3 |
|  | Minor Project #3: Structural Assessm. | Oct 5 | 15 | 20% | 1, 2,3 |
| **4** | **Dynamics** |  |  | -- | -- |
| Weeks 7-8 | Read |  | 9 | -- | -- |
| Oct 6-19 | Listen/View |  | 3 | -- | -- |
|  | Forum #4a: Coordination and Control | Oct 19 | 3 | 4% | 4 |
|  | Forum #4b: Design Dynamics | Oct 19 | 3 | 4% | 4 |
|  | Major Project #1: Org. Design Report | Oct 19 | 17 | 28% | 1,2,3,4 |
| Overall | Total estimated hours based upon 17 hours per week for 8 weeks |  | 132 | 100% |  |

Course Content

This section presents content that is mirrored in the online course  
  
**PERIOD 1: Systems**   
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objectives:** The key word for Period 1 is Systems. You will explore the world as living systems, comprised of interacting parts, drawn from natural, human, technical domains.

By the end of this period, you will be able to:

Explain repeated patterns of behavior as evidence of systems, or interactive and interdependent parts, which are structured to accomplish a higher order goal.

Share how one urban practitioner changed their mechanical mental model of ministry through living systems thinking to enable a relational “quiet revival.”

Recognize basic systems components in a supply chain, such as variables and links, inputs and outputs, stocks and flows, and feedback loops.

Study:

**Listen:** Meet in Google+ with your instructor to preview this period (1 hour).

**View:** Peter Senge: 2010 Systems Thinking in Action Conference Preview (5 min.), <http://youtu.be/E7_-nfb3f1s>

**View:** Bass J. & Lee, G. (2010) Introduction to Living Systems, (3 min.) [https://vimeo.com/10232428#](https://vimeo.com/10232428)

**Listen:** Hall, D. (2010) Doug Hall Introduces Living System Ministry, (2 min.) https://vimeo.com/22305803#

**View:** Living System Ministry, http://livingsystemministry.org/ Browse, (10 min.)

**View:** H1N1Flu Outbreak simulation, <https://forio.com/simulate/jeremyx/h1n1-embedded-version/overview/> After reading the overview, click the SIM URL to load the simulation. Adjust the variables in several runs to limit the spread of the flu in the high school. Then read “how does this simulation work” before you exit (30 min).

**Read:** Meadows & Wright (2008). *Thinking in systems*. pp. 1-141; 187-193 (8 hrs).

**Read:** Steinke (2006). How your church family works. pp. vii-60, chps 1-4. (3.5 hrs).

**Listen:** Systems Thinking with Peter Senge of The Fifth Discipline (42 min.)

<http://www.youtube.com/watch?v=b1G0Fs__u4g>

**Read:** Bean, M. (2006). Bullwhips and beer: Why supply chain management is so difficult, <http://forio.com/resources/article/bullwhips-and-beer/> (30 min).

**Dialogue:**

Respond to this period's Dialogue questions.

Forum 1A – The Systems Lens

What are the requisite components of systems? How do system models help us understand behavior over time? How do system models portray stocks and flow? Feedback? Why do complex systems surprise us? What traps do common system behaviors present us with? How do we get out? This forum is based on your study of Meadows, and your own work experience.

Forum 1B – Living Systems

Based on the experiences of Peter Steinke, how should we understand a congregation as a system? How did a systems view help us view our church as a living system in balance? Draw upon your reading and your experience to share how systems helps us redefine the root cause of problems?

Assignments:

Minor 1: The Near Beer Game

In this game, you play the role of a manager running a retail operation trying to maintain beer inventory in the face of customer demand. You experience the system dynamics of supply chains, and then write up your reflections on your experience, using insights from your readings.

This assignment presumes you have completed your Meadows and Hall’s reading, also Bean’s “[Bullwhips and beer](http://forio.com/resources/article/bullwhips-and-beer/)” before playing the game. It also assumes you have studied this supplemental Minor 1 instruction sheet, item by item.

The link to the game is: [http://forio.com/simulate/mbean/near-beer-game/run/#p=page0](http://forio.com/simulate/mbean/near-beer-game/run/%23p=page0)

This project will serve as a personal reference point to ground what you have learned so far in Period 1, and allow you to observe systems dynamics in action.

After you play three rounds, write up a 500-word essay, following the directions in the instruction sheet, describing your behavior and an explanation of the behavior of the system. This project will be graded with the MTM Grading Rubric.

Click on the title of this section, above, to be taken to the Course Dropbox, where you can upload your project by the end of this Period.

**PERIOD 2: Mapping**  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objectives:** The key word for Period 2 is Mapping. You will use systems thinking to map the goals, strategy, and environment of a selected organization.

By the end of this period, you will be able to:

Categorize the patterns that an organization has with respect to their internal goals, strategy, and environment.

Explain how technicians can overcome their low-level reductionist thinking when seeking to transfer technology to living systems.

Apply systems thinking to how a technology-focused organization strategic positions itself with respect to its environment, and evaluate its fit.

Study:

**Listen:** Meet in Google+ with your instructor to preview this period (1 hr).

**View:** Gary, J. (2014) Organizational Design, (28 min). http://youtu.be/70ckUvqlvlk

**Read:** Burton, et al. (2011). *Organizational design*. pp. 1-55 (6 hrs).

**Read:** Meadows & Wright, (2008). *Thinking in systems*. pp. 145-185 (3 hrs).

**Read:** Steinke (2006). How your church family works. pp. 61-144, chps 5-10. (5 hrs).

Dialogue:

Forum 2A – Organizational Design

Based on your readings in Burton et al., create a post that describes your selected organization (unit of analysis) in one of the three subsystems we are covering this period: goals, strategy, and environment. Explain the subsystem’s quadrants, and then justify your current assessment based on the textbooks diagnostic questions. Is this where the organization wants to be? Repeat the same process for your second post, only with a different subsystem. In your third post, evaluate the work that a colleague has done for their organization and offer insights on fits and misfits (p. 35-36, 51-52).

Forum 2B – System Practitioners

Based on your readings in Steinke, what tools do we have together to listen and question systems, as we immerse ourselves in them? How do systems help diagram the anxiety flow, as in the case of Transfiguration church? How do we practially deal with the Anxiety trap? Balance your post’s conceptual contributions to the forum with examples from your experience to illustrate how cat, rather than toaster rules, and shapes the emergence of healthy culture.

Assignments:

Minor 2: Strategic Assessment

Create a 5-7 page Consulting Report that evaluates the goals and strategy that a technology organization has adopted, and evaluate it against their environment (cf. Burton et al., pp. 1-55).

This Minor #2 should be written as the first-part of three-part report that will come together in Period 4 as your Major project—an internal organization design audit for a technology-focused organization. This assignment presumes you have obtained permission from an existing organization to examine their interconnected systems (for more see “A Note from the Instructor” in the Syllabus). You should narrow your unit of analysis to a substantial team, business unit, firm or larger enterprise. This could be a branch of government, or a department of college, or a large mega church (cf. Burton et al., pp. 9-10). This course will use to generic term “organization” to refer to any of these.

This assignment also presumes you are capable to initiate contact with your sponsoring manager through informal means, email, phone or water cooler chat (not meetings) to provide any input on your research into their strategy and environment, which you can’t find through public sources.

Your Minor #2 should cover this ground in report format (1.5 line spacing, ample margins, with a title page and sections to follow, linked with headers to the “navigation pane” in MS Word).

Background: Project intent, project sponsor (manager), a short organization description, and the role you will assume to evaluate their organization design.

Assessment: Based on Burton’s diagnostic questions, offer a current assessment of the organizational goals, strategy and environment. Use the Excel worksheet for this Minor project to score these three sub-systems. Include three quadrant diagrams and appropriate explanations in this section. Use sub-headers in your report to separate your coverage of these three sub-systems.

Recommendations: Summarize the organization’s current configuration (cf. Table 3.2, p. 52) and where the organization would like to be. Introduce the concept of fits and acknowledge alignments. Raise any questions about possible misfits and actions for consideration to improve strategic alignment.

Keep in mind this is not an academic, but an applied paper. You should write in concise business report format. You should communicate in language that a manager will understand. There is no need, as in Dialogue to cite your pages numbers, when quoting from Burton. Use in-text citation of sources as much as possible, rather than an end of report References section. Bottom of the page footnotes are permissible, but use them sparingly.

This project will be graded with the MTM Grading Rubric. Click on the title of this section, above, to be taken to the Course Dropbox, where you can upload your project by the end of this Period.

Your instructor will schedule a time in the next Period where you may be called upon to present your Strategic Alignment project in Google+. If you have extra time, convert your report over to a visual medium in 3-5 slides, in Power Point or Keynote. This will help you as you prepare for your Major Project in Period 4.

Once you receive your Minor #2 back from your Instructor, and you make revisions, send a copy to your Manager and ask for feedback.

**PERIOD 3: Design**  
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**Objectives:** The key word for Period 3 is Design. You will use systems thinking to examine the current design of structure, process and people systems of a technology organization.

By the end of this period, you will be able to:

Categorize the patterns that an organization has with respect to their internal systems that encompass structure, people and processes.

Apply systems thinking to how a technology organization designs its organizational chart, manages its knowledge exchange, divides its tasks, demands professionalization of its people, and builds a healthy climate.

Study:

**Listen:** Meet in Google+ with your instructor to preview this period (1 hr).

**Listen:** Meet in Google+ for student presentations of last Period’s Minor #2 (1 hr).

**Read:** Burton, et al. (2011). *Organizational design*. pp. 59-107, 109-161 (12 hrs).

Dialogue:

Forum 3A – Organizational Structure

Create a post that describes your selected organization in one of the following sub-systems: Configuration, Organizational Complexity, and Knowledge Exchange. Explain the subsystem’s quadrants, and then justify your current assessment based on the textbooks diagnostic questions. Repeat the same process for your second post with another subsystem, out the three options. In your third post, evaluate the work that a colleague has done for their organization and offer insights on fits and misfits (Burton, p. 77-82, 102-104).

Forum 3B – Process and People

Follow the same two posts, and one reply post pattern in this forum. The sub-systems are: Task design, People, and Climate. Plot where your organization is in two of these systems, and then offer thoughts on fits and misfits to a colleague (p. 152-159).

Assignments:

Minor 3: Structural Assessment

Create a Consulting Report that builds on your previous Strategic Assessment with a Structural Assessment that evaluates the structure, process and people systems that a technology organization has adopted (cf. Burton et al., pp. 59-161).

This Minor #3 is the second-part of three-part report that will come together in your Major project—an internal organization design audit for a technology-focused organization. Minor #3 should literally be written as an extension of Minor #2, in the same format. It should add on another 5-7 pages so your total report size should be 10-14 pages. Follow the same report structure.

Background: This section will be the same as your first report, only expanded to mention this is a part two of three part report. You will also mention that this covers structure, process and people systems, in addition to strategy and environment.

Assessment: Add another 6 sub-headers that cover Burton’s steps of structure, process and people, namely: Configuration, Organizational Complexity, ~~Geographic distribution,~~ Knowledge exchange, Task design, People, ~~Leadership Style,~~ and Climate onto your 3 sub-headers (you created in Minor #2). Use the next Excel worksheet to score these 6 sub-systems. Using Burton’s diagnostic questions and his quadrants, offer a current assessment of these sub-systems (you can omit “Geographic distribution,” and “Leadership” in your report for expediency sake).

Recommendations: Update the organization’s current configuration (cf. Table 8.1, p. 153), to include the structure, process and people systems. Recognize fits and raise any questions about possible misfits, along with actions for consideration to improve strategic and structural alignment.

Keep in mind that this project asks you to build your Minor #3 in the “boat” of your Minor #2. So this will be a combined report. You will incorporate any revisions of Minor #2 in this paper suggested by your Instructor, and/or from your Manager.

This project will be graded with the MTM Grading Rubric. Click on the title of this section, above, to be taken to the Course Dropbox, where you can upload your project by the end of this Period.

Your instructor will schedule a time in the next Period where you may be called upon to present your Structural Assessment project in Google+. If you have extra time, convert your report over to a visual medium in 3-5 slides, in Power Point or Keynote. This will help you as you prepare for your Major Project in Period 4.

Once you receive your Minor #3 back from your Instructor, and you make revisions, send a copy to your Manager and ask for feedback.

**PERIOD 4: Dynamics**  
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**Objectives:** The key word for Period 4 is Dynamics. You will use systems thinking to create an Organizational Design report for a technology-focused organization.

By the end of this period, you will be able to:

Categorize the patterns that an organization has with respect to their internal systems that govern Coordination/Control, Information Systems and Incentives.

Reflect on what it means to be a Ministry Practitioner in service to technology-focused organization, in the living systems world that God created.

Apply systems thinking to create an Organizational Design consulting report that diagnoses the systemic fitness of an organization, affirms what is vibrant, and offers options for improving what is not aligned, in terms of strategy, structure, people and control processes.

Study:

**Listen:** Meet in Google+ with your instructor to preview this period (1 hr).

**Listen:** Meet in Google+ for student presentations of last Period’s Minor #3 (1 hr).

**Read:** Burton, et al. (2011). *Organizational design*. 165-232 (7 hrs).

**Read:** Meadows & Wright (2008). *Thinking in systems*. pp. 145-165 (1 hr) (review again).

**Read:** Hall, et al. (2010). *The cat & the toaster*. pp. 324-348 (1 hr) (review again).

**Listen:** Meet in Google+ for short student presentations of Major #1 (1 hr).

Dialogue:

Forum 4A – Coordination and Control

Follow the same “two posts—one reply post” pattern in this forum. The sub-systems are: Coordination/Control, Information Systems and Incentives. Plot where your organization is in two of these systems, and then offer thoughts on fits and misfits of a colleague’s work (p. 152-159).

Forum 4B – Design Dynamics

Create an initial post that features a table of 12 design components we covered in this course (cf. Burton’s Table 10.1, p. 203); work across each row to highlight in yellow the cell your organization was classified into. This is an alternative way to lay out Figure 11.1 (p. 213). Explain what yellow highlights falling into different columns means for organization. In remaining posts, review what System Practitioners can do to work with people to align and change this complex managerial system. With reference to your organization, discuss the specific benefits you see to change your organization (bring design components into the same quadrant), and the difficulties of change (costs of living with misfits).

Assignments:

Major #1: Organizational Design

Create a Consulting Report and a short 7-slide Power Point that builds on your previous Strategic & Structural Assessments with a Coordination Assessment that evaluates the coordination/control, information systems and incentives that a technology organization has adopted (cf. Burton et al., pp. 165-207).

Major #1 is the third and final part of an internal organization design audit for a technology-focused organization. As before, Major 1 will build on Minor #2 and #3. Your total report should be under 20 pages. Follow the same report structure.

Abstract: Offer a short executive summary of your report in 200 words, on the lower half of your title page.

Background: This should cover: project intent, the duration of the project, a short organization description, and the role you assumed in relation to the project sponsor (manager) to evaluate their organization design.

Assessment: Add another 3 sub-headers to your previous 9 headers. The 3 new sub-headers should cover Burton’s systems of Coordination/Control, Information Systems and Incentives. Use the last Excel worksheet for this Minor project to score these sub-systems.

Recommendations: Interpret the meaning to your manager of your customized Table 10.1 (remember Forum 4B, p. 203) with its 12 design components, classified in 4 columns/quadrants. Discuss the synergy that comes from the fits; then address the misfits. Give special attention to power dynamics, resource systems, or organizational communications. Propose specific questions for consideration, and/or offer recommendations to change, along with the benefits. Draw upon the wisdom of Burton et al., Meadows or Hall to bring things into focus.

In addition to your paper, turn in a Power Point or Keynote show with 7 slides you could use to introduce your paper.

Your instructor will schedule a time right after you complete Major #1 where you and your colleagues can present your Organizational Design reports in Google+.

This project will be graded with the MTM Grading Rubric. Click on the title of this section, above, to be taken to the Course Dropbox, where you can upload your project by the end of this Period.

Once you receive your Major #1 back from your Instructor, and you make revisions, send a copy to your Manager and ask for feedback.

Estimated Activities and Times

Reading is measured at 25 textbook pages per hour for normal textbooks and reading 20 pages per hour for dense textbooks. Total reading for this course is 50 hours.

Listening to live sessions or recorded audio/video elements (in-class equivalent) – 9.00 hours

### MTM 504: Emerging Media Ministry (developed by John Edmiston)



**MTM 504**

**Emerging Media Ministry Syllabus**

**School of Science, Technology, Society and Ministry**

Instructor: John Edmiston

Email: [digitalopportunities@gmail.com](mailto:digitalopportunities@gmail.com)

Phone: (310) 783-1510

**Course Description**

This is a course in digital strategy and pragmatics for those entering into Christian ministry using new media technology and covers Internet ministry, mobile ministry, social media and Internet marketing and analytics.

**MTM Program Outcomes**  
At the conclusion of their MTM program, the student will able to:

1. Develop effective technology initiatives in a way that takes into account the unique cultures they will be serving and how to use technology to serve the poor.
2. Understand the Biblical basis, theology and historical context of technology and how to apply that in professional and ministry settings.
3. Understand the Christian vocation of Science, Technology, Engineering and Math careers and their unique identity and role within their field in a way that maximizes their calling and enables Christian ministry 24/7.
4. Understand complex systems in a way that helps them to effectively lead others and apply technology in ministry and professional environments.
5. Understand some of the limits of technology and how to counter some of the negative implications of technology and its effect on relationships and creation of new addictions.
6. Develop effective technology ministry strategies for developing sustainable initiatives by monitoring and understanding the latest theories, trends, tools and opportunities in technology in ministry

Course 504 helps students understand how to use the medium of the Internet to communicate a Christian message effectively in order to meet program outcome 6 above.

**Course Objectives**

1. Communicate a general statistical and social understanding of how both the Internet and mobile technology can be deployed as multiplying factors in Christian outreach, education and community transformation.
2. Clearly demonstrate an understanding of how to practically focus technological solutions on specific ministry problems using both the Internet and mobile technology as the main vectors of action.
3. Enumerate the ways in which Internet and mobile technology can achieve ubiquity of communication of Christian moral, theological and sociological values in the service of the Kingdom of God.
4. Develop an online marketing strategy that includes paid search, organic search, social marketing, conversion funnels and analytics
5. Develop a strategy and implementation plan that uses the Internet and/or mobile technology to achieve a result in **one** of the following areas: a) Christian outreach b) Christian education c) Missiological and cross-cultural communication d) Christian social entrepreneurship / justice issues.

**Expectations**

1. This course requires extensive engagement with the readings, the instructor and with other students.

2. Careful pacing and scheduling will be required and it is the task of the student to keep up with the work.

3. You will need good high-speed Internet access and word-processing software such as Microsoft Word or OpenOffice. You will also need a Kindle or the free Kindle for PC or Kindle for Mac software as many of the readings are in ebook format.

4. You will be expected to have a basic working understanding of digital technology and the Internet before commencing this course.

5. All posting in forums will be done in a spirit of Christian love, though vigorous debate is encouraged.

6. This course is a course in strategy and pragmatics. The expectation is that you will be clearly able to demonstrate a practical grasp of the new media, technology and how they can be applied to actual Christian ministry contexts.

7. Major written work is expected to reference and to interact with:

a) All four (4) of the required texts as well as the recommended websites.

b) At least three (3) of the recommended texts

c) The class readings and videos, MP3s etc.

**Required Texts**

Von Buseck, Craig *Netcasters: Using The Internet To Make Fishers of Men,*  B+H Publishing, 2010, Nashville.

International Mission Board. *Mobile Ministry Made Easy*[*http://mobileadvance.org/images/stories/ma/mobileministrymadeeasy09-2012.pdf*](http://mobileadvance.org/images/stories/ma/mobileministrymadeeasy09-2012.pdf)

Michael Hyatt, *Platform: Getting Noticed In A Noisy World ,*  Thomas Nelson, 2012, Nashville.

Jim F. Kukral, *Internet Marketing For Business Answers* (free on Kindle)

**Required Websites**

Internet Evangelism Day  
<http://www.internetevangelismday.com/>

Mobile Ministry Magazine  
<http://mobileministrymagazine.com/>

Mobile Ministry Forum  
<http://www.mobileministryforum.org/>

Cybermissions  
<http://www.cybermissions.org>

**Recommended Texts**

Allain, Bryan, *Community Wins: 21 Thoughts On Building A Thriving Online Tribe*

Davidson, Cathy N. & Goldberg David T. *The Future of Learning In A Digital Age,* MIT Press

Szoka, Berin and Marcus, Adam (editors) *The Next Digital Decade: Essays On The Future of The Internet*Miller, M. Rex. *2004 The Millennium Matrix,* San Francisco, Jossey-Bass (A Wiley Imprint)  
Clifford, Paul A., *Tweeting Church: Good News In Only 140 Characters*  
Goldfarb, Sam. *Facebook for Business* (available for free on Kindle)

Platt, Sean and Inny, Danny *How to Build a Blog: Create Awesome Content and Build Community* , Sterling and Stone (2012) available on Kindle for free

360i. *Mobile Marketing Playbook* (available on Kindle for free)

Mitchell, Melanie. *Standing Out With SEO* , Financial Times Press (a collection of 3 books available for free on Kindle)

**Course Outline**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Period** | **Assessments** | **Due**  **Date** | **Esthrs** | **Weight** | **Objective #’s** |
| **Weeks 1-2** | **Read** |  | 18 | -- | 1,2,3,5 |
|  | **Listen/View** |  | 3 | -- |  |
|  | Forum #1a Internet’s Impact for Gospel. |  | 3 | 4% | 1,3 |
|  | Forum #1b Internet Statistics. |  | 3 | 4% | 1,3 |
|  | Commence planning and outlining for two minor projects and major project |  | 2 |  |  |
| **Weeks 3-4 Mobile Ministry** | **Read** |  | 10 | -- | 1,2,3,5 |
|  | **Listen/View** |  | 9 |  |  |
|  | Forum #2a Mobile Ministry for Christians. |  | 3 | 4% | 1,3,5 |
|  | Forum #2b Mobile Security. |  | 3 | 4% | 2,5 |
|  | Minor Project #1. Internet or Mobile Strategy. |  | 10 | 10% | 2,5 |
| **Weeks 5-6  Social Networks** | Read |  | 16 | -- | 2,3,4,5 |
|  | **Listen/View** |  | 3 | -- |  |
|  | Forum #3a. Social Media Assessment. |  | 3 | 4% | 2,4,5 |
|  | Forum #3b Defining Friend in Social Media. |  | 3 | 4% | 2,3,4,5 |
|  | Minor Project #2 Social Media Strategy. |  | 10 | 15% | 1,2,3,4,5 |
| **Weeks 7-8  Marketing , SEO , Usability and Other Practical Considerations** | **Read** |  | 9 | -- | 4,5 |
|  | **Listen/View** |  | 4 | -- |  |
|  | Forum #4a Due: SEO for Christians. |  | 3 | 4% | 2,4 |
|  | Forum #4b Due: Conversion Funnel for Church. |  | 3 | 4% | 2,4 |
|  | **Major Project #1** Final Internet / Mobile Strategy. |  | 17 | 43% | 5 |
| Overall | Total estimated hours based upon 17 hours per week for 8 weeks |  | 135 | 100% |  |

**Estimated Activities and Times**

* Reading is measured at reading 25 textbook pages per hour and reading 20 journal pages per hour Total reading for this course is 60 hours.
* Listening to recorded audio/video elements or live sessions (in-class equivalent) - 12.00 hours
* Discussion (in-class equivalent) - 24 hours
* Written projects - 39.00 hours

**Course Content**

**Week 1-2**

**Read:**

Von Buseck, Craig *Netcasters: Using The Internet To Make Fishers of Men (entire book)*

Meeker, Mary; Internet Trends of the Year 2012  
<http://www.slideshare.net/kleinerperkins/2012-kpcb-internet-trends-yearend-update>

How To Evangelize The World From Your Computer (PowerPoint)  
<http://cybermissions.org/articles/evangelize_with_your_computer.pptx>

The Future of Internet Ministry  
<http://cybermissions.org/articles/ICCM-Europe/The%20Future%20Of%20Internet%20Ministry.pptx>

Internet Evangelism and The Unreached (PowerPoint)  
<http://cybermissions.org/articles/Internet_Evangelism_For_The_Unreached.pptx>

The Next Billion (PowerPoint)  
<http://cybermissions.org/articles/CMTA/The_Next_Billion.pptx>

Spend at least 4 hours browsing the enormous Internet Evangelism day website:

Internet Evangelism Day

<http://www.internetevangelismday.com/>

**Listen/View:**

Introduction to the Internet Evangelism and Mobile Ministry Course by John Edmiston (IMPORTANT)  
<http://cybermissions.org/articles/cityvision/Internet_Evangelism_Mobile_Ministry_Course_Intro.pptx>

What Is The Internet Really (Ted Talk, Andrew Blum)  
<http://www.ted.com/talks/andrew_blum_what_is_the_internet_really.html>

Interview with Tony Whittaker of Web Evangelism Day (audio)  
<http://cybermissions.org/articles/cityvision/interview_Tony_Whittaker_audio.mp3>

12 Ways That You Can Use YouTube For Your Church  
<http://youtu.be/6xC-kXB-zVk>

The Next Twenty Years of Digital Ministry by John Edmiston  
<http://www.youtube.com/watch?v=RHC9wcxQpQU>

**Forum #1a Internet’s Impact for Gospel.** How can the Internet help make the gospel ubiquitous (present everywhere)? How can it multiply your current or future ministry?

**Forum #1b Internet Statistics.** Reflect and comment on the statistics about the Internet , its reach and its potential for communication.

**Quiz 1**

**Week 3-4**

**Read:**

*Mobile Ministry Made Easy* (40 page PDF) International Mission Board <http://mobileadvance.org/images/stories/ma/mobileministrymadeeasy09-2012.pdf>

Mobile Discipleship (PowerPoint, lengthy)  
<http://cybermissions.org/articles/Mobile_Discipleship_2011a.pptx>

Tomi Ahonen : Android Won, Microsoft Lost (very long blog post)  
<http://communities-dominate.blogs.com/brands/2012/12/android-won-windows-lost-now-what-the-battle-of-the-century-is-decided-microsoft-relegated-to-ever-s.html>

Infographic: Why The Smartphone Isn’t Mainstream (yet) (Mashable)  
<http://mashable.com/2012/11/13/smartphone-infographic/>

Spend 4-6 hours reading articles from Mobile Ministry Magazine:  
<http://mobileministrymagazine.com/>

**Listen/View:**

The Unrestricted Mobile Future Of The Global Church  
<http://www.visualstorynetwork.org/video/mmf-2012-the-unrestricted-mobile-future-of-the-global-church>

Mobile Security Webinar (1 hr)  
<http://www.mobileministryforum.org/mobile-security-webinar-update-resources-links>

Discipleship and Theological Education Using Mobile Devices

<http://cybermissions.org/articles/gcia/index.html>

Mobile Ministry Issues With Implementation

<http://cybermissions.org/articles/gcia/index.html>

Mobile Strategy (from Biola Digital conference)  
<http://www.youtube.com/watch?v=rhRyEgEF1Pw>

Antoine Wright: The Future of Mobile  
<http://www.youtube.com/watch?v=P90T_u2Hrmk>

Ken Bringas: How Mobile Technology Is Changing My Role As A Pastor  
<https://www.youtube.com/watch?v=RV_lHk_OiU8>

Mobile Ministry Technology  
<http://www.youtube.com/watch?v=KJhGHxR4aOU>

Clyde Taber: Why Mobile?  
<https://www.youtube.com/watch?v=qg-85QdnKHM>

Dave Hackett: Mobile Ministry and Global Missions Strategy  
<https://www.youtube.com/watch?v=Bb9yg3LbLwc>

**Forum #2a Mobile Ministry for Christians**. What are some of the potential uses of mobile devices for Christian ministry in the developing world OR for social justice issues?

**Forum #2b Mobile Security.** What are some of the security issues facing Christian workers using mobile devices in hostile areas?

**Minor Project #1. Internet or Mobile Strategy.** Develop an Internet or mobile ministry strategy to solve a problem in Christian education and/or Christian discipleship.

**Week 5-6**

**Read:**

Michael Hyatt, *Platform: Getting Noticed In A Noisy World* (entire book)

How to Get Thousands of Twitter Followers by Peter Guirguis (NotAshamedofThe Gospel)  
<http://notashamedofthegospel.com/welcome-twitter-guide/>

The Simple Secret of Why People Share Your Content:  
<http://socialfresh.com/sharing-content/>

How A Top Social Media Marketer Gets Results  
<http://t.co/anAL6yhN>

25 Things That Make You Look Dumb On Facebook  
<http://blogs.constantcontact.com/product-blogs/social-media-marketing/25-things-that-make-you-look-dumb-on-facebook/>

8 Indispensable Tools To Improve Your Social Media Efficiency  
<http://www.businessesgrow.com/2012/11/01/8-indispensible-tools-to-improve-your-social-media-efficiency/>

Infographic: The Psychology of our Obsession With Social Media by Tina Cook  
<http://www.tinacook.tv/socialmedia/infographic/psychology-of-our-obsession-with-social-media/>

**Listen/View:**

How Social Media Can Make History (TED Talk, Clay Shirky)  
<http://www.ted.com/talks/clay_shirky_how_cellphones_twitter_facebook_can_make_history.html>

Digital Humanitarianism (TED talk, Paul Conneally)  
<http://www.ted.com/talks/paul_conneally_digital_humanitarianism.html>

Create a Church Facebook Fan Page  
<http://www.youtube.com/watch?v=JdRk9J8Cdn4>

Becoming Social Media Savvy Without Losing Your Soul, Brent McCracken (Biola Digital 2012)  
<http://www.youtube.com/watch?v=g0fGGpYzzD0>

Social Media For Non-Profits: 19 ways non-profits can use social media to connect with donors  
<http://www.youtube.com/watch?v=I0qhxej2wdA>

The Future of Social Media (Mashable Media Summit)  
<http://www.youtube.com/watch?v=zhOwWeS7FT8>

**Forum #3a. Social Media Assessment**. What are some of the advantages and disadvantages of social media for Christian ministry? Which forms of social media would work best in your ministry context?

**Forum #3b Defining Friend in Social Media**. What is a “friend”, and how does that affect how we can share the gospel online?

**Minor Project #2 Social Media Strategy**. Evaluate the various social media strategies available to your church or ministry and how you could create a powerful platform for the gospel in your particular ministry context.

**Week 7-8**

**Read:**

Jim F. Kukral*, Internet Marketing For Business Answers*

Benchmark Email: *Quick Start Guide To Email Marketing* (an ebook available from Kindle store for free)

20 Best Tools for SEO  
<http://www.netmagazine.com/features/20-best-tools-seo>

13 Easy Steps to Optimize your Website for SEO  
<http://bhgrealestateblog.com/2012/12/07/13-easy-steps-to-optimize-your-website-for-seo/>

The Power of Everything (free e-book on Mobile Marketing by Jay Bear)

<http://t.co/jepX2vki>

How to Use Google Analytics to Improve Your Social Media Marketing by Brian Reilly  
<http://www.socialmediaexaminer.com/google-analytics-custom-campaigns/>

What Is a Conversion Funnel?  
<http://www.webics.com.au/blog/conversion-tracking/conversion-funnel/>

Project Analysis Worksheet (to help with Major Project)<http://cybermissions.org/icafe/cd/icafe%20manual/small%20business%20training/Project%20analysis.pdf>

**Listen/View:**

Practical Usability, Matt Perman (Biola Digital 2012)  
<http://www.youtube.com/watch?v=Qcx0KcaduUA>

**C**ontent Strategy for the Real World, by Georgia Joseph (Biola Digital 2012) <http://www.youtube.com/watch?v=3q0Pphvqqgc>

The Online Conversion Funnel (Podcast on YouTube: audio, not video)  
<http://www.youtube.com/watch?v=qr2OIPcGiA8>

SEO for Startups (by a Google spokesperson)  
<http://www.youtube.com/watch?v=El3IZFGERbM>

5 Most Common Mistakes in SEO & 6 Good Ideas (by a Google spokesperson)   
<http://www.youtube.com/watch?v=6AmRg3p79pM>

Building The Right Web Strategy for Ministry, Drew Goodmanson (Biola Digital 2012) <http://www.youtube.com/watch?v=yPwdWrik_U8>

**Forum #4a - SEO for Christians**. Why does SEO matter for a Christian web ministry? How can it be implemented?

**Forum #4b - Conversion Funnel for Church**. What would be a typical conversion funnel for a church website of a medium-sized (300 member) church?

**Major Project #1** Final Internet / Mobile Strategy. Develop a strategy and implementation plan that uses the Internet and/or mobile technology to achieve a result in one of the following areas:   
a) Christian outreach   
b) Christian education   
c) Missiological and cross-cultural communication   
d) Christian social entrepreneurship / justice issues.

### MTM 506: Technology and Addiction (Developed by Andrew Sears)



**MTM 506**

**Technology and Addiction Syllabus**

**School of Science, Technology, Society and Ministry**

**Mission Statement**

To educate and equip others to spread the gospel of Jesus Christ and to meet human needs in His name through technology in both lay and professional ministry contexts.

Instructor: Greg Hopwood

Email: ghopwood@cityvision.edu

Phone:

**Course Description**

We live in an epidemic of addiction to sex, pornography, online affairs, gaming, online gambling, the Internet and Facebook--all addictions that are exacerbated by technology. This course is intended to equip students with an interdisciplinary approach to minister to those with technology-related addictions combining lessons from the disciplines of counseling/psychology, theology, public health and technology.

**MTM Program Outcomes**

At the conclusion of their MTM program, the student will able to:

1. Develop effective technology initiatives in a way that takes into account the unique cultures they will be serving and how to use technology to serve the poor.
2. Understand the Biblical basis, theology and historical context of technology and how to apply that in professional and ministry settings.
3. Understand the Christian vocation of Science, Technology, Engineering and Math careers and their unique identity and role within their field in a way that maximizes their calling and enables Christian ministry 24/7.
4. Understand complex systems in a way that helps them to effectively lead others and apply technology in ministry and professional environments.
5. Understand some of the limits of technology and how to counter some of the negative implications of technology and its effect on relationships and creation of new addictions.
6. Develop effective technology ministry strategies for developing sustainable initiatives by monitoring and understanding the latest theories, trends, tools and opportunities in technology in ministry

MTM 510 helps students understand technology-related addictions in order to meet program outcome 5 above.

**Course Objectives**

After completing this course, students will be able to:

1. Understand the significance of technology-related addictions and develop relationships and accountability structures to ensure your own sobriety and a healthy diet of media, technology and relationships. (Awareness and Health)
2. Equip yourself and others with resources, strategies and technology tools to protect individuals, families and communities from technology-related addictions. (Prevention and Accountability)
3. Understand the resources available to get help if you or others you know face issues of technology-related addictions and to be equipped to make referrals and as appropriate help with peer support groups within your ministry context. (Treatment)

**Required Texts**

Laaser; Mark.[*Healing the Wounds of Sexual Addiction*;](http://www.amazon.com/Healing-Wounds-Sexual-Addiction-Laaser/dp/0310256577/ref=sr_1_1?s=books&ie=UTF8&qid=1359645015&sr=1-1&keywords=healing+the+wounds+of+sexual+addiction) Grand Rapids, Michigan, Zondervan. 1996; 2004

Young, Kimberly S., and Cristiano Nabuco de Abreu, eds. [*Internet Addiction: A Handbook and Guide to Evaluation and Treatment*](http://www.amazon.com/Internet-Addiction-Handbook-Evaluation-Treatment/dp/047055116X/ref=sr_1_5?s=books&ie=UTF8&qid=1359644024&sr=1-5&keywords=internet+infidelity). 1st ed. Wiley, 2010. 312 Pages. ISBN: 047055116X.

Closs, Howard. [*Christian Life Accountability Program*](http://www.amazon.com/Christian-Accountability-Program-Howard-Closs/dp/1462706517). CrossBooks Publishing, 2011. 184 pages. ISBN: 1462706517.

*Celebrate* Recovery *Revised Edition Leader’s Guide A Recovery Program Based on Eight Principles from the Beatitudes.* (2012). Zondervan. 288 pages. ISBN: 0310689651

**Recommended Texts**

Doan, Andrew P; Strickland, Brooke.[*Hooked on Games: The Lure and Cost of Video Game and Internet Addiction*](http://www.amazon.com/Hooked-Games-Video-Internet-Addiction/dp/193557602X/ref=wl_it_dp_o_pC_nS_nC?ie=UTF8&colid=2WEVXRUAD5HAY&coliid=I219YWHW1VJ8HM)

Carnes, Patrick; Delmonico, David L.; Griffin, Elizabeth.[*In the Shadows of the Net: Breaking Free of Compulsive Online Sexual Behavior*](http://www.amazon.com/In-Shadows-Net-Breaking-Compulsive/dp/1592854788/ref=wl_it_dp_o_pC_nS_nC?ie=UTF8&colid=2WEVXRUAD5HAY&coliid=I2BQCYBCDAQQVO), Hazelden; Center City, Minnesota

Roberts, Kevin. [*Cyber Junkie: Escape the Gaming and Internet Trap*](http://www.amazon.com/Cyber-Junkie-Escape-Gaming-Internet/dp/1592859488/ref=wl_it_dp_o_pC_S_nC?ie=UTF8&colid=2WEVXRUAD5HAY&coliid=I1VVLCBMKGXSX5)

Osuagwu, Nnamdi Gordon.[*Facebook Addiction: The Life & Times of Social Networking Addicts*](http://www.amazon.com/Facebook-Addiction-Social-Networking-Addicts/dp/0979748038/ref=sr_1_1?ie=UTF8&qid=1357843238&sr=8-1&keywords=facebook+addiction)

[Jantz, Gregory L.](http://www.amazon.com/Gregory-L.-Jantz/e/B001ITVQ6E/ref=sr_ntt_srch_lnk_3?qid=1357843354&sr=1-3) . [*Hooked: The pitfalls of media, technology and social networking*](http://www.amazon.com/Hooked-pitfalls-technology-social-networking/dp/1616382570/ref=sr_1_3?s=books&ie=UTF8&qid=1357843354&sr=1-3&keywords=technology+addiction)

[Maheu, Marlene M.;](http://www.amazon.com/Marlene-M.-Maheu/e/B001K8M6VW/ref=sr_ntt_srch_lnk_6?qid=1357843452&sr=1-6) Subotnik, Rona. [*Infidelity on the Internet: Virtual Relationships and Real Betrayal*](http://www.amazon.com/Infidelity-Internet-Virtual-Relationships-Betrayal/dp/1570717222/ref=sr_1_6?s=books&ie=UTF8&qid=1357843452&sr=1-6&keywords=online+affairs) (Nov 1, 2001)

Laaser, Mark. *A L.I.F.E. Guide: Men Living in Freedom Everyday*, Xulon Press Fairfax, Va.

Carnes, Patrick. *Contrary to Love*, Hazelden Foundation

Weiss, Douglas. *The Final Freedom,* Discovery Press; Fort Worth, Texas

Weiss, Douglas. *101 Freedom Exercises*, Discovery Press; Fort Worth, Texas

**Course Outline**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Period** | **Assessments** | **Due**  **Date** | **Esthrs** | **Weight** | **Objective #’s** |
| **1**  **Weeks 1-2** | Awareness, Health and Accountability  Read |  | 18 | -- |  |
|  | Listen/View |  | 3 | -- |  |
|  | Forum #1a |  | 3 | 4% |  |
|  | Forum #1b |  | 3 | 4% |  |
|  | Quiz 1 |  | 2 | 5% |  |
| **2**  **Weeks 3-4** | Prevention  Read |  | 16 | -- |  |
|  | Listen/View |  | 3 |  |  |
|  | Forum #2a |  | 3 | 4% |  |
|  | Forum #2b |  | 3 | 4% |  |
|  | Minor Project #1. |  | 10 | 15% |  |
| **3**  **Weeks 5-6** | Treatment Part 1  Read |  | 16 | -- |  |
|  | Listen/View |  | 3 | -- |  |
|  | Forum #3a |  | 3 | 4% |  |
|  | Forum #3b |  | 3 | 4% |  |
|  | Minor Project #2 |  | 10 | 20% |  |
| **4**  **Weeks 7-8** | Treatment Part 2  Read |  | 10 | -- |  |
|  | Listen/View |  | 3 | -- |  |
|  | Forum #4a Due: |  | 3 | 4% |  |
|  | Forum #4b Due: |  | 3 | 4% |  |
|  | Major Project #1 |  | 17 | 28% |  |
| Overall | Total estimated hours based upon 17 hours per week for 8 weeks |  | 135 | 100% |  |

**Estimated Activities and Times**

* Reading is measured at reading 25 textbook pages per hour and reading 20 journal pages per hour Total reading for this course is 60 hours.
* Listening to recorded audio/video elements or live sessions (in-class equivalent) - 12.00 hours
* Discussion (in-class equivalent) - 24 hours
* Quizzes (in-class equivalent) - 2.00 hours
* Written projects - 37.00 hours

### MTM 507: Capstone Design (Developed by Andrew Sears)



**MTM 507**

**Capstone Project Design Syllabus**

**School of Science, Technology, Society and Ministry**

**Mission Statement**

To educate and equip others to spread the gospel of Jesus Christ and to meet human needs in His name through technology in both lay and professional ministry contexts.

Instructor: Andrew Sears

Email: andrew@techmission.org

Phone: 617-282-9798 x101

Credits: 1

**MTM Program Outcomes**

At the conclusion of their MTM program, the student will able to:

1. Develop effective technology initiatives in a way that takes into account the unique cultures they will be serving and how to use technology to serve the poor.
2. Understand the Biblical basis, theology and historical context of technology and how to apply that in professional and ministry settings.
3. Understand the Christian vocation of Science, Technology, Engineering and Math careers and their unique identity and role within their field in a way that maximizes their calling and enables Christian ministry 24/7.
4. Understand complex systems in a way that helps them to effectively lead others and apply technology in ministry and professional environments.
5. Understand some of the limits of technology and how counter some of the negative implications of technology and its effect on relationships and creation of new addictions.
6. Develop effective technology ministry strategies for developing sustainable initiatives by monitoring and understanding the latest theories, trends, tools and opportunities in technology in ministry

MTM 507 will help students develop a plan for their Capstone Project in MTM 508 which will represents the culmination of the student experience in the Science, Technology, Society and Ministry program and will integrate all 6 course objectives.

**Course Description**

This course is designed to introduce the student to the requirements of the Capstone course proposal. A major focus of the course will be to choose and refine their Capstone project based on feedback from faculty, peers and partner organizations.

**Course Objectives**

Upon successfully completing this course, the student should:

1. Have a reflected on and designed her/his Capstone Project including a timeline from which to work on the Capstone project.
2. Understand the process of research and implementation for the Capstone Project.
3. Identified and secured agreement with an organization and/or advisor to provide mentoring and a practical context for project implementation.
4. Have a completed Final Project proposal to the STM Program Director for Approval

**Required Texts**

Bender, Sharon. [Producing the capstone project](http://www.lulu.com/shop/capstone-writer/producing-the-capstone-project/ebook/product-17395277.html). Raleigh: Lulu Enterprises Inc, 2009. ISBN: 9780557088454. 80 pages.

**Course Outline**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Period** | **Assessments** | **Due**  **Date** | **Est hrs** | **Weight** |
| **Weeks 1-2** | Read Producing the capstone project. |  | 4 |  |
|  | Listen/View. Designing your capstone project slidecast |  | 1 |  |
|  | Submit abstract(s) of proposal as forum post. If you are trying to decide between multiple proposals, you may submit more than one abstract. | End of Week 2 | 3 | 5% |
| **Weeks 3-4** | Research and submit informal draft bibliography and list of websites with information relevant to your project. | End of Week 3 | 5 | 5% |
|  | Conference Call with STSM Program Director | Week 4 | 1 | 2% |
|  | If using outside advisor or organization, identify and contact potential advisor and mentoring organizations for capstone project | End of Week 4 | 2 |  |
|  | Forum: review at least two other student’s abstracts and bibliographies and provide substantial helpful feedback. | End of Week 4 | 2 | 3% |
| **Weeks 5-6** | Submit Draft of Capstone Project Proposal | End of Week 5 | 8 | 10% |
|  | If using outside advisor or organization, finalize selection of potential advisor and mentoring organizations for capstone project | End of Week 5 | 1 |  |
|  | Forum: review at least two other student’s draft proposals and provide substantial helpful feedback | End of Week 6 | 3 | 3% |
|  | Conference Call with STSM Program Director | Week 6 | 1 | 2% |
| **Weeks 7-8** | If using outside advisor or organization, secure contract with potential advisor and mentoring organizations for capstone project | End of Week 7 | 2 | 20% |
|  | Submit final Capstone Project Proposal | Week 8 | 12 | 50% |
| Overall | Total estimated hours based upon 4-5 hours per week for 8 weeks |  | 45 |  |

**Estimated Activities and Times**

* Reading is measured at reading 25 textbook pages per hour and reading 20 journal pages per hour Total reading for this course is 5 hours.
* Listening to recorded audio/video elements or live sessions (in-class equivalent) - 1 hours
* Discussion (in-class equivalent) - 5 hours
* Written projects - 34.00 hours

**Course Content**

**Weeks 1-2**

**Read**

*Producing the capstone project.*

**Listen/View.**

Designing your capstone project slidecast

**Forum**

Submit abstract(s) of proposal as forum post. If you are trying to decide between multiple proposals, you may submit more than one abstract.

**Weeks 3-4**

Conference Call with STSM Program Director

If using outside advisor or organization, identify and contact potential advisor and mentoring organizations for capstone project (ungraded)

**Assignments**

Research and submit informal draft bibliography and list of websites with information relevant to your project.

**Forum**

Review at least two other student’s abstracts and bibliographies and provide substantial helpful feedback.

**Weeks 5-6**

**Assignments**

Submit Draft of Capstone Project Proposal

If using outside advisor or organization, finalize selection of potential advisor and mentoring organizations for capstone project (ungraded)

**Forum**

Review at least two other student’s draft proposals and provide substantial helpful feedback

Conference Call with STSM Program Director

**Week 7-8**

If using outside advisor or organization, secure contract with potential advisor and mentoring organizations for capstone project

**Assignments**

Submit final Capstone Project Proposal

### MTM 508: Capstone Project



**MTM 508**

**Technology and Ministry Capstone Syllabus**

**School of Technology and Ministry**

**Mission Statement**

To educate and equip others to spread the gospel of Jesus Christ and to meet human needs in His name through technology in both lay and professional ministry contexts.

Instructor: Andrew Sears

Email: andrew@techmission.org

Phone: 617-282-9798 x101

Credits: 5 or 8

**MTM Program Outcomes**

At the conclusion of their MTM program, the student will able to:

1. Develop effective technology initiatives in a way that takes into account the unique cultures they will be serving and how to use technology to serve the poor.
2. Understand the Biblical basis, theology and historical context of technology and how to apply that in professional and ministry settings.
3. Understand the Christian vocation of Science, Technology, Engineering and Math careers and their unique identity and role within their field in a way that maximizes their calling and enables Christian ministry 24/7.
4. Understand complex systems in a way that helps them to effectively lead others and apply technology in ministry and professional environments.
5. Understand some of the limits of technology and how to counter some of the negative implications of technology and its effect on relationships and creation of new addictions.
6. Develop effective technology ministry strategies for developing sustainable initiatives by monitoring and understanding the latest theories, trends, tools and opportunities in technology in ministry

The MTM 508 Capstone Project represents the culmination of the student experience in the Science, Technology and Ministry program and will integrate all six course objectives.

**Course Description**

The Capstone represents the culmination of the student experience in the Science, Technology and Ministry program. The Capstone should show an integrated interdisciplinary understanding of the overall Science, Technology and Ministry program. The capstone project should represent a practical work that could be useful to an organization, business or the general public. There are three types of projects that may constitute a project:

1. **Content-Focused Project.** The student will produce a major work of content that can be of use to others. This content could be a course, content-focused website, toolkit, book or major research paper or some combination of these.
2. **Technology-Focused Project.** The student will create a new technology tool which might include a mobile/web app, module, open source software, project, code-driven website or other project that focuses on developing a technology product or component. These projects will be modeled similar to [Google’s Summer of Code](http://code.google.com/p/google-summer-of-code/wiki/AdviceforStudents). Students will work with the Capstone Course Instructor to define their coding project.
3. **Entrepreneurial-Focused Project.** The student will work to create a new business, organization or initiative. The completed work might include a business or strategy plan and other practical elements of launching the initiative.

While most students will select one of the above types of projects, students may also involve elements of all three types of projects if they prefer.

The capstone project is a significant piece of work: it represents work of a higher standard than what is normally expected of a term paper and provides an opportunity for students to synthesize all their learning into a substantial piece of work contributing to their field of interest. Students are strongly encouraged to use their ongoing MTM courses to incubate and develop aspects of their project. For example, exploring the theological basis of it in their Theology of Technology Course or the systems perspective in their Systems Thinking course. These ideas could then be synthesized into the research paper for their capstone project.

A major goal of the capstone project is for you to do a practical work that will improve your employability and marketability. If your sponsoring organization is your employer, the question you should be asking is “What would make this project valuable enough to my employer that they would feel that your MTM Master’s degree was well worth your time and money.” If your sponsoring organization is not your employer, the question you should be asking is: “How do you design your project so that it is valuable enough that your sponsoring organization would either want to 1) hire you 2) keep you on as a volunteer 3) continue your project with other staff.” If you are seeking a job, the question you might ask is: “How would this project demonstrate my skills that would improve my chances with the types of employers I’m seeking?”

Students may select to do either a 5-credit or 8 credit capstone project course. Students planning to take this as a 5 credit course, should expect to spend at least 225 hours working on this project including reading, writing and other aspects of the project. Students taking an 8 credit course should expect to spend at least 360 hours.

**Course Objectives**

Upon completion of the Science, Technology and Ministry Capstone course, students will be able to:

1. Create a major product(content, technology, entrepreneurial) that significantly contributes toward the field of MTM in a way that can be used and replicated by others.
2. Synthesize materials learned in the MTM program and apply it toward a significant program or opportunity in the field.
3. Collect and evaluate comprehensive research in a particular domain of MTM and apply that toward significant program or opportunity in the field.
4. Help spread this solution by communicating, defending and distributing (in written, oral and multimedia formats) a solution to a particular problem or opportunity in the field of MTM in a way that can be effectively replicated by others.

**Project Structure**

Each capstone project in the Science, Technology and Ministry program will consist of four components:

1. **Research Paper.**  This will provide a summary of major reading, research and background relevant to the student’s project.
2. **Product.** This will include the end product related to the student’s project. This could include a course, website, toolkit, book, research paper, mobile/web app, module, open source software project, business plan or other elements of a new initiative.
3. **Presentation/Oral Defense.** This will provide a summary of the overall project. The presentation should be one hour and will be presented to other students and faculty via video conference.
4. **Project Web page on CityVision.edu.** For all projects this will serve as an archive of all elements of the project including the research paper, product elements and presentation. For website and content driven projects, this will include the content produced in the project.

It should be noted that the type of project will determine how much emphasis should be placed on each component.

**Science, Technology and Ministry**

**Capstone Project Proposal Template**

**Name:**

**Date of Submission:**

**Project Type(s)**

[ ] Content-Focused Project

[ ] Technology-Focused Project

[ ] Entrepreneurial-Focused Project

**Sponsoring Organization:**

**Organization Contact Name:  
Organization Contact E-mail: Phone Number:**

**Faculty Advisor:**

**Title of project:**

**Background (1 page)**

**Project Summary (1 page)**

**Project Goals** (3 to 8 bullet points following [SMART Criteria](http://en.wikipedia.org/wiki/SMART_criteria))

**Product Summary (1 paragraph to 1 page)**

Please describe the end product you will produce. This could include a course, website, toolkit, book, research paper, mobile/web app, module, open source software project, business plan or other elements of a new initiative.

**Research Paper Outline (1-2 pages)**

The following serves as a skeleton of an outline. Students should provide a much more detailed outline for their proposal

1. Abstract
2. Background
3. Literature Review
4. Chapter Topic 1
5. Chapter Topic 2
6. Chapter Topic 3
7. Chapter Topic 4
8. Conclusion
9. Bibliography
10. Appendix (you can use any previously written works here)

**Fit with Capstone Project Objectives**

**Note:** While all projects should contain the four objectives below, different projects may emphasize different objectives more than others. For example, a content-focused project may involve more research (Objective 4), while a technology project may focus more on a technology product (Objective 1).

***How will your capstone serve as a major product that significantly contributes toward the field of MTM in a way that can be used and replicated by others? (100-200 words)*** Relates to Objective 1. Create a major product that significantly contributes toward the field of MTM in a way that can be used and replicated by others.

***How will your project synthesize materials learned in the MTM program and apply that toward a significant problem or opportunity in the field? (100-200 words)*** Relates to Objective 2. Synthesize materials learned in the MTM program and apply it toward a significant problem or opportunity in the field.

***How will you package this project in a way that can be easily replicated by others and promote it to enable the widest dissemination possible? i.e. Impact = Quality x Reach (100-200 words)***Relates to Objective 3. Communicate, defend and disseminate (in written, oral and multimedia formats) a solution to a particular problem or need in the field of MTM in a way that can be effectively replicated by others.

***Collect and evaluate comprehensive research in a particular domain of MTM and apply that toward significant program or opportunity in the field.*** Relates to Objective 4.

**Initial Research Plan, Bibliography and Literature Survey**

Please list any books, articles, websites, blogs, etc. that you plan to include in your bibliography and literature survey. Use MLA style for references (feel free to use bibliography generator websites or plugins).

**Required Reading/Viewing**

Students should develop their own required reading list for this course. Reading is measured at reading 25 textbook pages per hour and reading 20 journal pages per hour. Total reading for this course may constitute 25-50% of the hours for the project. Students may also include viewing time for online presentations, videos etc. Required reading cannot include any reading materials used in other parts of the MTM program.

**Timeline & Project Plan**

Below is a template for a timeline. In submitting your capstone proposal, you may work with your faculty advisor to modify this to fit your needs. Students planning to take this as a 5 credit course, should schedule at least 225 hours working on this project including reading, writing and other aspects of the project. Students taking an 8 credit course should expect to spend at least 360 hours. While most projects are expected to take 16 weeks, students may also extend the period.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Period** | **Assessment** | **Est. hrs.** | **Weight** | **Due date** |
| **Weeks 1-4** | Reading/Research/Writing/Product Implementation | 45 | -- | Week 4 |
|  | **Forum Progress Report 1.** Please provide a one page summary of where you are in your project including details on your progress for reading, writing and implementing your project. You may also post any materials for your peers to review. | 2 | 2% | End of Week 3 |
|  | Forum: review at least two other student’s progress reports and provide substantial helpful feedback | 2 | 1% | End of Week 4 |
| **Weeks 5-8** | Reading/Research/Writing/Product Implementation | 46 | -- | Week 8 |
|  | **Forum Progress Report 2**. Please provide a one page summary of where you are in your project including details on your progress for reading, writing and implementing your project. You may also post any materials for your peers to review. | 2 | 2% | End of Week 7 |
|  | Forum: review at least two other student’s progress reports and provide substantial helpful feedback | 2 | 1% | End of Week 8 |
| **Weeks 9-12** | **Submit First Draft, Product Beta and Project Web Page**. Please provide a one page summary of where you are in your project including details on your progress for reading, writing and implementing your project. You may also post any materials for your peers to review. | 50 | 4% | End of Week 11 |
|  | Forum: review at least two other student’s draft proposals and provide substantial helpful feedback | 2 | 1% | End of Week 12 |
| **Weeks 13-16** | **Conference Call with Capstone Advisor** | 2 |  | Week 13-14 |
|  | **Conference Call with Sponsoring Organization** | 2 |  | Week 13-14 |
|  | **Submit Final Draft of Research Paper, Product Beta, Presentation & Project Web Page.** | 60 | 80% | Week 16 |
|  | Capstone Oral Defense (and preparation) | 10 | 9% | Week 17 |
| Overall | Total estimated hours based upon 15 hours per week for 12 weeks | 225  (360) | 100% |  |

**High Level Project Plan.** Students should also estimate how many hours they plan on reading. While most students will only choose one focus area (Content, Technology, Entrepreneurial), some may have projects across focus areas. All students should plan to allocate allocate at least the following minimum hours for each component of the capstone: Reading/Research (10%), Writing (10%), Project (10%), Presentation (5%) and Web Page (5%). It is expected that Technology projects would have a much higher portion of hours focused on product since much of the work might involve coding, etc. Similarly, many content focused projects may have more hours on reading a

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Focus Area** | **Reading Hours** | **Writing Hours** | **Product Hours** | **Presentation Hours** | **Web Page**  **Hours** | **TOTAL** |
| **Content Project** |  |  |  |  |  |  |
| **Technology Project** |  |  |  |  |  |  |
| **Entrepreneurial Project** |  |  |  |  |  |  |
| **TOTAL** |  |  |  |  |  | 225 or 360 |

**Grading/Weight**

The weight of grading for the capstone project will be depending on the project plan listed above. The faculty advisor will use the project plan to develop a weight of various components of the project. For example, a capstone projects involving extensive web programming would have a strong weight on the product, while a capstone project more focused on research would have a stronger weight on research.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Advanced | Proficient | Poor | Weight |
| Objective 1. Product Contribution | Product is outstanding and addresses a major need in a practical way integrating the principles of MTM. | Product is of acceptable quality in meeting a practical need integrating the principles of MTM. | Product has limited practical use in the field of MTM and/or is significantly lacking in quality. | Min 10% |
| Objective 2. Demonstrate Synthesis of MTM Master’s Program | Excellent writing that demonstrates mastery of all 5 MTM Program objectives, and synthesizes them around a significant opportunity or problem in the field. | Writing is acceptable and demonstrates mastery of most of the MTM Program Objectives in addressing a significant opportunity or problem in the field. | Writing does not effectively demonstrate mastery of the 5 MTM Program objectives and synthesizes them around a significant opportunity or problem in the field. | Min 30% |
| Objective 3. Research and Application | Provides comprehensive synthesis of relevant research addressing a significant problem or opportunity in the field. | Provides limited research or does not effectively synthesize research to apply it to a significant problem or opportunity in the field. | Project does not demonstrate adequate research for their project or does not adequately apply it. | Min 10% |
| Objective 4. Written, Oral, & Multimedia Communication | Provides an package that is effectively communicating the project in a way can be easily replicated and used by others and meets all professional standards of writing, presenting and best-practices for online materials. | Provides a package with limited effectiveness of communication or ability for others to replicate or limited professional communication standards. | Does not provide a package that effectively communicates the project or enables it to be replicated or has limited professional communication standards. | Min 10% |

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Name of Academic Advisor Signature, Academic Advisor Date

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student Signature Date

### MTM 511: Social Entrepreneurship (Developed by Andrew Sears)



**MTM 511**

**High Tech Social Entrepreneurship Syllabus**

**School of Science, Technology, Society and Ministry**

**Mission Statement**

To educate and equip others to spread the gospel of Jesus Christ and to meet human needs in His name through technology in both lay and professional ministry contexts.

Instructor: Andrew Sears

Email: andrew@techmission.org

Phone: 617-282-9798 x101

**Course Description**

This course will explore the discipline of social entrepreneurship focused on high-tech initiatives.

**MTM Program Outcomes**

At the conclusion of their MTM program, the student will able to:

1. Develop effective technology initiatives in a way that takes into account the unique cultures they will be serving and how to use technology to serve the poor.
2. Understand the Biblical basis, theology and historical context of technology and how to apply that in professional and ministry settings.
3. Understand the Christian vocation of Science, Technology, Engineering and Math careers and their unique identity and role within their field in a way that maximizes their calling and enables Christian ministry 24/7.
4. Understand complex systems in a way that helps them to effectively lead others and apply technology in ministry and professional environments.
5. Understand some of the limits of technology and how to counter some of the negative implications of technology and its effect on relationships and creation of new addictions.
6. Develop effective technology ministry strategies for developing sustainable initiatives by monitoring and understanding the latest theories, trends, tools and opportunities in technology in ministry.

MTM 511 helps students will explore the discipline of social entrepreneurship focused on high-tech initiatives in order to meet program outcome 6 above.

**Course Objectives**

1. Apply management strategies and techniques of high tech social entrepreneurs for evaluating opportunities, developing innovation, scaling, sustainability, and social impact for their initiative.
2. Learn the unique opportunities, challenges and pitfalls facing entrepreneurs and to reflect and apply that to their own experience in technology initiatives as a Christian.
3. To understand the funding challenges facing social entrepreneurs and to apply that to develop a sustainable funding strategy.
4. To understand the functional elements of social enterprises including human resources, accounting, leadership and board management to be able to develop a complete strategy.
5. To evaluate current strategies and to develop a strategic plan for a high-tech social initiative incorporating the principles taught in this course.

**Required Texts**

Ries, Eric. *The Lean Startup: How Today’s Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*. First Edition. Crown Business, 2011. 335 pg. ISBN: 0307887898.

Wasserman, Noam. *The Founder’s Dilemmas: Anticipating and Avoiding the Pitfalls That Can Sink a Startup*. Princeton University Press, 2012. 480 pg. ISBN 0691149135.

Drucker, Peter F. *Managing the Nonprofit Organization*. Reprint. HarperBusiness, 2006. 256 pg. ISBN 0060851147.

**Recommended Texts**

Oster, Dr Gary W. *The Light Prize: Perspectives on Christian Innovation*. Positive Signs Media, 2011. ISBN 0983453306.

Ralph, McCall. *Entrepreneur? Workbook, Bring Your Vision to Life: A 25 Day Journey for Christian Entrepreneurs*. Destinee S.A., 2011.

Bornstein, David. *How to Change the World*. Updated ed. Oxford; New York City, NY: Oxford University Press, 2007, ISBN 9780195334760, 358 pg.

Collins, Jim. *Good to Great and the Social Sectors: A Monograph*, (Harper Collins, 2005, ISBN 097732640).

Elkington, John; Hartigan, Pamela. *The Power of Unreasonable People: How Social Entrepreneurs Create Markets That Change the World*.

Scofield, Rupert. *The Social Entrepreneur's Handbook: How to Start, Build, and Run a Business That Improves the World*.

Welch, Wilford. *The Tactics of Hope: How Social Entrepreneurs are Changing the World*. (Earth

Aware, 2008, ISBN 160109014-5).

**Course Outline**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Period** | **Assessments** | **Due**  **Date** | **Esthrs** | **Weight** | **Objective #’s** |
| **1.**  **Weeks 1-2** | **Founding & Startup**  Read |  | 18 | -- | 1,2, |
|  | Listen/View. |  | 3 | -- |  |
|  | Forum #1a. Personal Reflection |  | 3 | 4% |  |
|  | Forum #1b. Initial Idea |  | 3 | 4% |  |
| **2**  **Weeks 3-4** | **Funding, Sustainability & Business Models**  Read |  | 16 | -- |  |
|  | Listen/View: |  | 3 |  |  |
|  | Forum #2a. Working Business Models Case Study Research |  | 3 | 4% |  |
|  | Forum #2b. Sustainable Business Models Discussion |  | 3 | 4% |  |
|  | Minor Project #1. Strategic Plan: Needs Assessment, Vision, SWOT |  | 10 | 15% |  |
| **3**  **Weeks 5-6** | **Management, Accounting, Measurement and Human Resources**  Read |  | 16 | -- |  |
|  | Listen/View |  | 3 | -- |  |
|  | Forum #3a. What are your most important metrics? |  | 3 | 4% |  |
|  | Forum #3b. Limitations of measurement in ministry |  | 3 | 4% |  |
|  | Minor Project #2. Strategic Plan: Budget, Staffing |  | 10 | 20% |  |
| **4 Weeks 7-8** | **Strategic Planning**  Read |  | 10 | -- |  |
|  | Listen/View |  | 3 | -- |  |
|  | Forum #4a Due: Personal Reflection |  | 3 | 4% |  |
|  | Forum #4b Due: Strategic Plan Peer Feedback |  | 3 | 4% |  |
|  | Major Project #1. Complete Strategic Plan/Business Plan |  | 17 | 28% |  |
| Overall | Total estimated hours based upon 17 hours per week for 8 weeks |  | 135 | 100% |  |

**Estimated Activities and Times**

* Reading is measured at reading 25 textbook pages per hour and reading 20 journal pages per hour Total reading for this course is 60 hours.
* Listening to recorded audio/video elements or live sessions (in-class equivalent) - 12.00 hours
* Discussion (in-class equivalent) - 24 hours
* Quizzes (in-class equivalent) - 2.00 hours
* Written projects - 37.00 hours

### MTM 512: Grant and Proposal Writing (Developed by Andrew Sears)



**MTM 512**

**Grant and Proposal Writing Syllabus**

**School of Science, Technology, Society and Ministry**

**Mission Statement**

To educate and equip others to spread the gospel of Jesus Christ and to meet human needs in His name through technology in both lay and professional ministry contexts.

Instructor: Barbara Clemenson

Email: bclemenson@cityvision.edu

Phone:

**Course Description**

This course will focus on grant and proposal writing covering the research and prospect identification process, foundation grants, government grants and the relational process of grant approvals.

**MTM Program Outcomes**

At the conclusion of their MTM program, the student will able to:

1. Develop effective technology initiatives in a way that takes into account the unique cultures they will be serving and how to use technology to serve the poor.
2. Understand the Biblical basis, theology and historical context of technology and how to apply that in professional and ministry settings.
3. Understand the Christian vocation of Science, Technology, Engineering and Math careers and their unique identity and role within their field in a way that maximizes their calling and enables Christian ministry 24/7.
4. Understand complex systems in a way that helps them to effectively lead others and apply technology in ministry and professional environments.
5. Understand some of the limits of technology and how to counter some of the negative implications of technology and its effect on relationships and creation of new addictions.
6. Develop effective technology ministry strategies for developing sustainable initiatives by monitoring and understanding the latest theories, trends, tools and opportunities in technology in ministry.

MTM 512 helps students learn grant and proposal writing in order to meet program outcome 6 above.

**Course Objectives**

1. To understand the competitive marketplace of grants, research grants that will fit with your organization’s strategies and capabilities, and develop systems for continuously identifying the best prospects.
2. To write professional grant proposals for corporate and private foundations that present your organization in a way to maximize your chance of getting approved.
3. To conduct research and write professional grant proposals for governmental grants that present your organization in a way to maximize your chance of getting approved
4. To understand the relational element of getting your grant approved including identifying contacts, getting meetings, presenting your opportunity in person and how review and approval processes work.

**Required Texts**

Karsh, Ellen, and Arlen Sue Fox. *The Only Grant-Writing Book You’ll Ever Need: Top Grant Writers and Grant Givers Share Their Secrets*. Third Edition. Basic Books, 2009.

Locke, Lawrence F., Waneen W. (Wyrick) Spirduso, and Stephen Silverman. *Proposals That Work: A Guide for Planning Dissertations and Grant Proposals*. 5th ed. SAGE Publications, Inc, 2007.

**Course Outline**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Period** | **Assessments** | **Due**  **Date** | **Esthrs** | **Weight** | **Objective #’s** |
| **1**  **Weeks 1-2** | **Grant Marketplace and Research**  Read |  | 18 | -- |  |
|  | Listen/View |  | 3 | -- |  |
|  | Forum #1a |  | 3 | 4% |  |
|  | Forum #1b |  | 3 | 4% |  |
|  | Minor Project #2. |  | 2 | 5% |  |
| **Weeks 3-4** | **Grant Writing for Foundations**  Read |  | 16 | -- |  |
|  | Listen/View |  | 3 |  |  |
|  | Forum #2a |  | 3 | 4% |  |
|  | Forum #2b |  | 3 | 4% |  |
|  | Minor Project #2. |  | 10 | 15% |  |
| **Weeks 5-6** | **Grant Writing for Government Grants**  Read |  | 16 | -- |  |
|  | Listen/View |  | 3 | -- |  |
|  | Forum #3a |  | 3 | 4% |  |
|  | Forum #3b |  | 3 | 4% |  |
|  | Minor Project #3 |  | 10 | 20% |  |
| **Weeks 7-8** | **Relational Element to Grant Proposals**  Read |  | 10 | -- |  |
|  | Listen/View |  | 3 | -- |  |
|  | Forum #4a Due: |  | 3 | 4% |  |
|  | Forum #4b Due: |  | 3 | 4% |  |
|  | Major Project #1 |  | 17 | 28% |  |
| Overall | Total estimated hours based upon 17 hours per week for 8 weeks |  | 135 | 100% |  |

**Estimated Activities and Times**

* Reading is measured at reading 25 textbook pages per hour and reading 20 journal pages per hour Total reading for this course is 60 hours.
* Listening to recorded audio/video elements or live sessions (in-class equivalent) - 12.00 hours
* Discussion (in-class equivalent) - 24 hours
* Quizzes (in-class equivalent) - 2.00 hours
* Written projects - 37.00 hours

## Appendix D. Survey of Experts on Master’s in Technology and Ministry

Below is the survey content that was sent to a range of experts by email through SurveyMonkey. This survey was sent to the list of Advisory Board Members listed in Chapter 8.

Program Objectives

The overall vision of the program is to equip Christians in Science, Technology, Engineering and Math (STEM fields) to use their skills for ministry. Our goal is to help meet the needs of both Christians in secular jobs and those working in tech jobs in churches and ministries.

Below is a list of the objectives of the overall program. After completing the program, students should be able to:

• Develop effective technology programs in a way that takes into account the unique cultures they will be serving and how to use technology to serve the poor and cross­cultural communities

• Understand the Biblical basis, theology and historical context of technology in ministry and how to apply that in professional settings

• Develop effective technology ministry strategies by monitoring and understanding the latest theories, trends, tools and opportunities in technology in ministry

• Understand the Christian vocation of Science, Technology, Engineering and Math (STEM) careers and their unique identity and role within their field in a way that maximizes their calling and enables Christian ministry 24/7

• Understand complex systems in a way that helps them to effectively lead others and apply technology in ministry and professional environments

• Understand some of the limits of technology and how counter some of the negative implications of technology and its effect on relationships and creation of new addictions \*

1. How would you change the above program objectives? Are there other objectives you think should be added? If you were to design this program yourself, how would you change the high level direction?

Course Materials

To achieve the objectives on the previous page, we have developed the following list of courses:

• Theology of Technology

• Organizational Systems

• History and Case Studies of Technology in the Church

• Emerging Media Ministry

• Appropriate Technology in the IT Field

• Theology of Work in STEM Professions

• Technology & Addiciton

• High Tech Social Entrepreneurship

• Science, Technology and Ministry Capstone Project

You can view the detailed descriptions and syllabi at: http://www.cityvision.edu/mstsm/masters­science­technology­society­and­ministry \*

2. What changes would you make to this list of courses? What courses should be added or removed and why? What high level changes would you make to the syllabi for these courses?

3. Many of you have significant expertise in some of the topics covered in our courses. What books, resources, articles, presentations, websites are you aware of that could be useful for us to consider adding to these courses? Could you recommend any people (including yourself) who might be able to provide a presentation as a guest speaker via Google Hangouts for these courses?

Market Need

The target audience for this program is people who have an undergraduate degree in STEM fields, but would like to bridge their expertise into either the world of professional or lay Christian ministry.

Because of limited resources, we will initially focus where TechMission and City Vision’s strongest expertise is: computer science/IT primarily with either lay or parachurch ministries.

Some of the assumptions of the students entering our program are that they might roughly be:

• Degree Background: An estimated 40% will have a degree in computer science/IT, 40% are techies from other STEM fields and 20% are self­ taught techies with degrees in non­STEM fields

• Employment: Initially more than 50% of students will be techies working for Christian college, parachurch or church; however, as the program matures, we expect that the majority of students will be Christians in STEM fields in secular jobs.

• Outward/Inward: 60­70% will be in roles using technology as ministry (outward) and 30­40% will be focused on supporting IT for the organizations operations (inward)

• Leadership: 40% will have no leadership ambitions as they would rather focus exclusively on tech rather than people, 30% will be on a track to be a CTO and 20% will be on a track to be a CIO, 10% will be on a track to be a CEO

Some of the areas of employment for graduates from our program include technology staff at churches and ministries including computer programmers, information technology staff and chief technology/information officer. In addition, many graduates will continue to work in secular contexts in STEM careers, but will be better equipped to use their skills in volunteer lay ministry contexts and professionally. A third category of careers will be in secular nonprofit/governmental careers that are very similar to ministry careers where similar principles of appropriate technology and social implications of technology will be critical issues. \*

4. The intent of our strategy is to target the intersection of our strengths with the need, and to focus on that target market initially and expand from there. Do you believe that we have identified the right target market? Based on what you understand of the opportunity in this space, how would you suggest changing the target market?

5. What do you believe would be the major motivation for Christians working in Christian ministries to participate in this program? How well do you believe that this program would meet this need prepare people to serve in a tech position in Christian ministries? How would you change it to better prepare them?

Additionally, if you are with a Christian organization: 1. How well would this program prepare people to serve in tech positions in your organization? 2. If one of your staff asked to participate in this program, what would it take to make this program something that you would be willing to invest your organization's time and money to make that worthwhile?

6. What do you believe would be the major motivation for Christians in STEM fields working in secular companies to pursue this program? How well do you believe that this program would the needs of these Christians working in secular companies? How would you suggest we change the program to better meet their needs?

7. Any other suggestions for improving this program? Any other people that you would suggest we get input from regarding this program?

Response Data to Survey

**Q1 How would you change the above program objectives? Are there other objectives you think should be added? If you were to design this program yourself, how would you change the high level direction?**

**Answered: 22 Skipped: 0**

**# Responses Date**

1 Something to consider... appears to be an over use of 'develop' and 'understand.' May want to consider reframing in terms that match the complexity of the task. Or, consider reframing in terms of competencies.

3/15/2014 8:53 PM

2 What you have looks great. I might suggest more emphasis on leadership, which is mentioned as a by-product in one of the objectives but otherwise is missing from the larger picture.

3/13/2014 4:12 PM

3 Understand is not measurable. You need to use something like "Identify" 3/13/2014 1:15 PM

4 I think the objectives look valuable. 3/13/2014 12:09 PM

5 I think there is a need to in some way to establish an applied theology around technology. Our tools are changing rapidly, and how those tools can be used by the rest of the world impacts the Church. The more networked the world becomes, the more important this issue will be. The Body needs individuals who understand both technology and theology enough where they can see the potential pros and pitfalls on the horizon and suggest ways for the church to respond.

6/12/2013 7:35 AM

6 These are great objectives. One area that possibly deserves attention is the world of sci/tech/math as a mission field. The rise of Christianity in China, Brazil, and Inida (e.g. http://www.pewforum.org/uploadedfiles/Topics/Issues/Politics\_and\_Elections/051805-global-christianity.pdf ) means that there will be increasingly more opportunities for Christians in the USA to interact with among tech professionals worldwide. Some basic training in terms of cultural and scientific apologetics might be useful.

6/11/2013 10:27 AM

7 Might clarify what is meant my technology (info tech, bio tech, structural tech, etc.) 3/10/2013 12:23 PM

8 I think these are comprehensive and seem to aim at the main purpose of the program. The main issues will be aligning these objectives with various courses and their assignments, ensuring the objectives are assessable and can be demonstrated to have been accomplished. One small edit for the last objective, insert "to": Understand some of the limits of technology and to how counter some of the negative ....

2/26/2013 3:01 PM

9 Needs to be more elegantly stated e.g. (inserts in are in caps\_ . Develop effective technology programs in a way that takes into account the unique cultures they will be serving and ALSO how to use technology IN SERVICE TO the poor and to cross-cultural communities • Understand the Biblical basis, theology and historical context of technology in ministry and ITS RELEVANT APPLICATION IN professional settings • Develop effective technology ministry strategies by monitoring and understanding the latest theories, trends, tools and opportunities DELETE LAST FEW WORDS • CONCEPTUALIZE Science, Technology, Engineering and Math (STEM) careers DELET BIG CHUNK and their unique identity in SUCH a way that maximizes their calling and enables Christian ministry ZAP "24/7" AS KITSCHY • BE ABLE TO EFFECTIVELY DEPLOY COMPLEX SYSTEMS in ministry and professional environments • BE ABLE TO IMPLEMENT TECHNOLOGICAL SOLUTIONS IN CONSTRUCTIVE , ETHICAL AND SPIRITUALLY AND RELATIONALLY HEALTHY WAYS WITH A DEVELOPED AWARENESS OF THE LIMITATIONS AND POETNETIALLY DESTRUCTIVE APPLICATIONS OF TECHNOLOGY Understand some of the limits of technology and how counter some of the negative implications of technology and its effect on relationships and creation of new addictions

2/22/2013 3:14 PM

10 These are excellent. Your last outcome touches on Technology ethics which is important but you might state it more overtly. You mention the role of technology in ministry, but you might also use the term 'missions' since that opens up an important but related application. Do you have any concrete skill goals that you want to include as an outcome, especially related to management of technology teams or integrating technology into an organization's goals and culture? Do you want your graduates to also be capable of shaping internal culture? Do you want your graduates to be trained in how to keep the edges sharp through skills in constant learning to stay as much as possible aware of the latest technologies?

2/21/2013 7:02 AM

11 \* Understand methods and opportunities for collaboration within STEM careers, especially to connect and collaborate for Christian ministry within them. \* Articulate the various platforms and streams of technology ministry, including familiarity with terms and use cases.

2/20/2013 6:50 PM

12 The objectives are well articulated. I do not think adding any would be helpful. If I were to design it myself, I might emphasize the need and value in understanding multiple stakeholder needs

2/18/2013 8:01 PM

13 This is really solid and comprehensive. 2/18/2013 8:16 AM

14 While some of the statements imply it, I would recommend explicitly mentioning: Apply leadership and project management skills to ensure responsible resource management when developing or implementing technology for ministry.

2/15/2013 2:00 PM

15 A few thoughts: - Understand the Christian worldview perspective on how all careers can be done in a way to glorify God (i.e. discuss Biblical guidelines on ethics issues, spiritual fruit, being a witness, ...) This may already be covered in your point 2. - In the current objectives, it seems to suggest that a secular job and Christian ministry are two different things. We need to convey that even within your secular job, you can be fulfilling God's purpose for your life in the quality of work, the way you treat others, and the verbal & non-verbal witness of your faith. - Some great objectives about how STEM careers can lead the way in creating ministry opportunities. I'm also wondering if it should also contain objectives in the area of finding person's of peace within your secular work environment. These careers have the potential to interface with powerful segments of society that are not easily reached with the gospel. Some training in reproducing discipleship principles could be very helpful.

2/13/2013 8:31 AM

16 The objectives look fine. I would add: 1) The creation of high quality Christian technology programs that can compete with secular programs; 2) Adapting technology programs in a Christian context.

2/11/2013 3:54 PM

17 This degree is really focused on digital technologies. The association with STEM, while a great buzzword, is not really what you are doing. If you really intend for that to be a part of it, then require the STEM course and make one of the other courses an elective. Or maybe create two "concentrations" where students choose which classes to take as electives.

2/8/2013 7:38 PM

18 Ministry is a practical field and using technical skills in ministry need practical learning. Most of these program objectives appear to be more comprehension oriented. One way to make these objectives more practical is to replace "understand" with key words like "Act, Identify, Perform, Demonstrate, Articulate, Exercise, Exhibit". For example, "Articulate some of the limits of technology and demonstrate how to counter some of the negative implications of technology and its effect on relationships and creation of new addictions" Besides changing key words, some of the objectives may need some more modification towards a more practical end or practical objectives may need to be added.

2/8/2013 1:49 PM

19 Can you perhaps also explain the difference between online ministry that is primarily discipleship or C2C (to adapt business jargon, ie 'Christian to Christian', and that which is C2O 'Christian to outsider', whether it is direct evangelism, or equipping/mentoring/advising non-Christians vocationally, in life skills, or any other sort of input. Christians tend to be good at C2C, and rubbish at C2O because they carry on using the language and assumptions they'd use for C2C. I think the first paragraph particularly on http://www.cityvision.edu/cms/cv/masters-science-technology-ministry could benefit from some simplification and shorter sentences. (There's also a typo). :-) I don't know if you are going to ask more detailed questions later in the survey, so I may be duplicating here, but there are several aspects to digital communication that I'd hope would be part of your training: a) how to run a distance learning program, especially mediated through mobile phones, SMS, etc, as is being successfully done for teaching in Tanzanian schools. b) the role of mobile phones, especially for communities who cannot afford any other electronic device c) the role of social networking to enhance by word of mouth any message, group, organisation, idea, campaign, etc.

2/8/2013 12:37 PM

20 "Technology" is an elusive term. It can mean "stuff," but it can also mean the attitude behind the "stuff." So I'm not sure what technology is referred to here, whether -- as a result of the STEM focus -- it is engineering- focused, or if the technologies of interest are, say, media technologies, or whether they are humanitarian in scope, or all of the above. I think the term is not as precise as the objectives seem to imply. Secondly, there is not a focus here on the ethics of employing technology (which depends, of course, on how it is defined). I think that should be an important dimension for the program.

2/8/2013 10:35 AM

21 Andrew, this is Jay Gary. Understand the extension of information technology into emerging nanotechnology, biotechnology and neuro-technology sectors.

2/7/2013 2:03 PM

22 I think one of the areas missing is message development. Many times we think the how and not the what of a strategy to reach the lost.

2/7/2013 1:56 PM

**Q2 What changes would you make to this list of courses? What courses should be added or removed and why? What high level changes would you make to the syllabi for these courses?**

**Answered: 21 Skipped: 1**

**# Responses Date**

1 Appropriate Technology in the IT Field. Hmm... I am not sure what to call it, but appropriate maybe needs to be Intentional or something? The names of these courses are outstanding.

3/15/2014 9:02 PM

2 Not sure what all will be covered in your Organizational Systems class, but more organizational leadership and management classes would be helpful. Students must understand how organizations in general function, in addition to the specific "quirks" of congregational leadership. They must also be able to effectively lead teams on projects.

3/13/2014 4:23 PM

3 My experience has been that text and audio communication isn't a given skill of IT professionals. Sometimes those with the best message, aren't able bring "salt and light" do to limited communication skills, and the challenge of distance communication skills. It may be valuable to have a communication course, with a goal of building the skills of communicating via video confrencing, social networking, email, and phone. And a framework for when each of this is most important

3/13/2014 12:19 PM

4 I would add a course that train students how to explain technology fundamentals to both church leadership and the congregation. This would not be a guide on how to lead a How-To class. It would be focused on how to teach fundamental concepts of how data and networks work and how that effects daily living. For example - many people in the church may not understand that digital data is infinitely copy-able. What does that mean for me regarding the way I treat my information? We have a information imbalance in society that allows those who understand technology to take advantage of people who don't. This training would help address that.

6/12/2013 7:47 AM

5 One area that I found consistently lacking among Christian techies is just basic understanding of economics principles. And they are certainly not getting it from the pulpit, or even theological scholarship! But my experience with technology ventures is that market opportunity is primarily driven more by macro-economic trends and only secondarily driven by micro-economic consideration. The rise of the BRIC economies in the last decade has more to do with macro picture than tech innovation. Conversely, even though the USA has an arguably healthy tech industry, the macro picture is limiting the growth. The bottom line is that a theology of technology cannot be separated from a theology of economics because technology is mostly about doing things cost-effectively. Many tech companies in the USA operate under a "Crossing the Chasm" model. It is all about defining a niche. It is easy therefore to extrapolate and think that's really how the world operates under. The truth is quite far from that. The real enabler of Microsoft in the 90s is imported labor from India. The real enabler of Apple in this decade is supply chain from the Foxconn of China. In some respect, our world is more like the ancient Egypt, where slaves do the work under technocrats so that they can make themselves rich selling goods across the ocean to the Greeks and the Romans. So my point being, one cannot understand the world of technology without looking at the manufacturing process, the logistic, the fiscal and monetary policy, etc. These are all economic forces.

6/11/2013 10:59 AM

6 I was not able to access the course syllabi at the time of survey so am unable to make detailed comments on the content focuses. I find the course "Sexual, Pornography and Technology-Related Addictions" a very odd course (at least in it's title). I am guessing this course will deal specific issues related to Ethics and Moral and tech use, but am wondering why a whole course would be focused on these issues stated in the title, as it assumes a techno deterministic approach to technology just by this course framing. It seems a general ethics of technology might be more appropriate with such themes covered in specific section.

3/10/2013 12:32 PM

7 The "Sexual, Pornography and Technology-Related Addictions" class is an important consideration, but I would suggest possibly reversing the title to focus on the main realm of study in this program. It could be something like "Technology-Related Addictions, and Sex and Pornography". I could not access the syllabus for this class, and it is a deep and complicated realm of study for which STM students need to be personally prepared. However, the depth of the study needs to be appropriate for technology-oriented students who are going to process things differently to social science students. I expect you already have faculty who are skilled in this regard, and I am sure they'll do a great job.

2/26/2013 4:03 PM

8 Sexual, Pornography and Technology-Related Addictions WOULD BE BETTER AS "ETHICAL, PERSONAL AND SOCIOLOGICAL IMPACTS OF TECHNOLOGY" (its bigger than just addiction)

2/22/2013 3:17 PM

9 This are very good. Some topics that could be included inside some of your existing courses: Technology,

Management and organizational culture Technology Personal Assessment - helping students to understand and articulate their own personal niche in the wider technology world

2/21/2013 7:07 AM

10 \* Ministry Collaboration in the Technological, Global Realm \* Using Alliances, Networks and Partnerships to further Technology-Related Ministry

2/20/2013 7:00 PM

11 I would think that a course on technology related addictions is too specific. I would think a course on the law and technology would be useful.

2/18/2013 8:04 PM

12 I love the course list. The only thing that seems missing is just a basic, foundational bible or theology overview course. Perhaps your students are fairly well educated already, but in an increasingly biblically illiterate culture, your students might not have clear understandings of how the Biblical story fits together as a whole, what do we mean by "Trinity", etc.

2/18/2013 8:21 AM

13 At the degree description page the wording is awkward in the first sentence under "Who is the MSTM Program For?": "There is a great need to provide bridge the worlds of science" I saw that your pre-requisites were for students already holding technology degrees. Many of these students will have most likely been well introduced to technology, but they may not have had an I.T. view. I'm not suggesting a software development course, but a general information systems course that provides an overview of available technologies found in the corporate space and how the concepts are applied (e.g. enterprise architecture, requirements elicitation, cloud technology and tools such as RFID, bar codes etc.) Second, in regards to "Information Technology and the Poor", I believe that's too limited. I recommend consideration of a more generalized course addressing the digital divide. That divide is about more than just poor people. It also addresses the need in many places where population groups have been barriers. This includes the aged, members of the work force who are about to lose their jobs because they have not kept up with technology and other segments.

2/15/2013 2:16 PM

14 MSTM 502 "Systems Thinking" - I'm not familiar with this technology, but this course seems a bit out of place with the objectives. I would think a course in Change Management may be more appropriate to help people in these careers navigate the huge changes going on around them. I really like the practical nature of MSTM 507 & 508 - great idea to bring it all together like that. The degree objectives talk about 4 broad areas of technical careers: Science, Technology, Engineering and Math. The majority of the courses seem to just address technologies that focus on the internet. That does impact all areas, but there is much more than that. I think MSTM 510 should be a required course, because it seems to address these issues.

2/13/2013 9:02 AM

15 I would add courses on: 1) Developing technology businesses as ministry (Business as Mission); 2) Technology use in the local church; 3) Adapting secular technologies into a Christian context; 4) Technology and mission context.

2/11/2013 3:54 PM

16 Add another STEM course, maybe specifically engineering or biological sciences to make a "track". You should also add a course on how to research digital technology use by potential audiences. It does not make sense to build a digital presence if you do not understand how your potential audience uses it. A class on digital strategy. Maybe there is a business course they can take on this.

2/8/2013 7:38 PM

17 The course list has a good variety. My only recommendation would be for the course on "Information Technology and the Poor". I think there needs to be a section on maximizing technology in poor, majority world areas. It would be good for students to understand what kind of technologies are in various majority world countries and how to be able to maximize those technologies for ministry.

2/8/2013 2:01 PM

18 OK, I think you are including some of what I mentioned in previous answer. I'd just add that increasingly, mobile is going to be the delivery system for almost everything digital, whether in the West or the Majority World. So everything we do needs to be seen through a mobile lens primarily.

2/8/2013 12:44 PM

19 Now, these courses imply a more precise view of technology than the objectives suggested. But I'm not sure that systems thinking is as useful as several of the other courses. That seems more macro-oriented, when the other courses seem more micro-oriented.

2/8/2013 10:40 AM

20 I see you have "Theology of Work in STEM Prof." . That is an elective in your other lists. I would add an elective on technology roadmapping and the future of technology development in various sectors (unless your High Tech Social Ent covers this).

2/7/2013 2:07 PM

2/7/2013 21 I would recommend looking at foundational communication courses that would address the gap in the SRM

2:05 PM program regarding message development. Some years ago I proposed a Certificate in MediaStrategy and missions to Liberty (turned down). Here is the list of courses: Coms 110 Introduction to Mass Communications (3 credits) [RL] An overview of the role of print and electronic media in the dissemination of information to a mass audience. Coms 220 Writing for Media (3 credits) [RL] This course provides a survey of media writing formats and writing techniques from news for print and broadcast, to advertising and public relations. The course is designed to provide an understanding of the basic techniques used by the professional to inform and/or persuade audiences. Coms 307 Introduction to Advertising and Public Relations (3 credits) [DH] This survey course examines the principles and theory of Public Relations and Advertising as well as all the other integrated promotional strategies common in the field today. This is essential to help the student better recognize in which area he or she is better suited. Special emphasis will be given to the theory and practices with the emphasis on the communication of promotional strategies. VCAR 222 Desktop Publishing (3 credits) [EE] The ability to type and a knowledge of the computer keyboard is needed. As a caution, students without this basic skill may find this deficit to hinder their progress. Desktop publishing skills and/or topics include a brief history of typography and printing; theory, principles, and procedures of typography; rudimentary design principles; page layout software features that specify type, format style sheets, set up a design grid, appear on tool palettes, permit modification of graphics and text files, etc. Production of desktop publishing projects including simple components generated either by replication or by creation. Acquisition of a working knowledge of a professional page layout program. Introductory use of a scanner. (No Preq) Plus two of the following courses: Coms 346 Advertising Copyrighting and Design [DH] Building on Coms 307, Introduction to Advertising and Public Relations, Coms 346 covers the advertising field in more depth, addressing such topics as branding, advertising history, planning, budgeting, and copywriting. Students will also look at modern trends in the advertising including interactivity in the process of developing an advertising plan for a client. Preq Coms 307 Coms 356 Direct Marketing Communication [DH] An introduction to the theory and practice of the direct/interactive response field, including mail order, direct response advertising, measurability and accountability; lists and database, and the cultivation of customers through direct response communication. Emphasis will be placed on communication strategies emerging from new technologies as well as an overview of its’ historical roots. Preq Coms 307 Coms 357 – Public Relations Writing [RL] This course builds upon the news writing techniques taught in COMS 220 and COMS 234 and the principles of advertising and public relations taught in COMS 307, while orienting the student toward the types of written products generated by public relations professionals. This advanced course will refine a student’s writing skills while paying close attention to the various formats such as press releases, media advisories, crisis plans, press kits, etc. Preq Coms 222 and 307 Coms 367 Public Relations Strategies [RL] A comprehensive study of public relations strategy, decision making and program planning featuring a case-study approach to learning. Preq Coms 307 and Coms 357

**Q3 Many of you have significant expertise in some of the topics covered in our courses. What books, resources, articles, presentations, websites are you aware of that could be useful for us to consider adding to these courses? Could you recommend any people (including yourself) who might be able to provide a presentation as a guest speaker via Google Hangouts for these courses?**

**Answered: 21 Skipped: 1**

**# Responses Date**

1 Digital Disciple Digital Leadership (Sheninger)- a K12 based book with principles worth reviewing, explores the Personal Learning Network aspect of collaborative learning. Consider the certificate in technology and ministry a stand alone to market. Would be happy to and can provide some names: Mindi Thompson, ACU Kaye Shelton, Lamar University Have others

3/15/2014 9:02 PM

2 Shane Hipps material on leadership and technology - Flickering Pixels. John Weaver, Director of Educational Technology at Abilene Christian University, teaches a great course on Tech in Ministry. He might be open to guest lecture or recommend specific resources. Kyle Dickson, Director of the Learning Studio at ACU, could help with your media classes. Conversations with the "I School" (IT degree) at ACU would also be beneficial. Contact Department Chair Brad Crisp. He's done some solid work with capstone-type projects.

3/13/2014 4:23 PM

3 Dr. Jason Baker, Regent University, may be a good author to begin with concerning communication and distance education. I can't think of any specific books or articles, but he has expertise in both Distance Learning and Communication.

3/13/2014 12:19 PM

4 Unfortunately I'm not aware of many resources in this area. I would be willing to help in the search for applicable content and resources.

6/12/2013 7:47 AM

5 I am working with about a dozen or so Christian friends of mine, mostly classmates at MIT who have gone on to receive some theological trainings at seminaries, to put together a web site "ChristianTechies.com". We haven't launched it yet. It'd be mostly bookmarks but will also feature some blogs and editorial articles, kind of like RealClear\*. We hope that can serve as a hub for exchanging ideas, recommending books, etc. My own experience with the tech industry has mostly be learned hands-on by working in various VC-funded and self- funded startups. So I spent as much of my times in market research and product design as in engineering. Successful technologists need to think in both sides of the fence.

6/11/2013 10:59 AM

6 Again, I have been unable to look as specific syllabi for these course so can not provided much concrete feedback. For technology and theology I might recommend people like Dwight Friesen, Andrew Beyers, Michael Delashmutt. For online ministry I would recommend folks with the Mobile Ministry forum and Arjo deVroom with Why Jesus? ecoaching. For books I would recommend Digital Religion ed by Heidi Campbell (Routledge, 2013) and When Religion Meets New Media by Heidi Campbell (Routledge , 2010) and the forthcoming Networked Theology by Heidi Campbell & Michael Delashmutt (Baker Academic 2014).

3/10/2013 12:32 PM

7 Thanks for the opportunity to contribute resources, however these topics are not really what I am proficient in and I don't have things to contribute - sorry.

2/26/2013 4:03 PM

8 see my syllabi etc. 2/22/2013 3:17 PM

9 I will do further research and get these to you. 2/21/2013 7:07 AM

10 As to resources you could find useful: \* www.internetevangelismday.com I would be able to present as a guest speaker on: \* Online Ministry, Mobile Ministry and Evangelism

2/20/2013 7:00 PM

11 You might want to consider some of the work on holistic engineering. While not Christian, it does make the point that engineering must be broadly considered

2/18/2013 8:04 PM

12 I (John Dyer) would be happy to continue doing so. Others - John Saddington - Drew Dickens, NeedHim, - Nathan Matias - http://civic.mit.edu/users/natematias (MIT)

2/18/2013 8:21 AM

13 For systems thinking, I have found "Thinking in Systems, A Primer" by Donella H. Meadows the most accessible as a text for my students.

2/15/2013 2:16 PM

14 I would highly recommend some training in reproducing discipleship. Many people in secular jobs struggle with knowing how they can be a witness at work. It would be good to have some practical course work on how to disciple someone from unbelief to a deep walk with God. Many movements of God around the world have started from workplace situations, because believers are able to intersect with the lost in tremendous ways. Some great books on this topic are, Steve Smith: T4T - A Discipleship Re-Revolution, Steve Addison: What Jesus Started, and Mike Shipman: Any3. This isn't specifically technology related, but more about how to be a witness within a secular job situation.

2/13/2013 9:02 AM

15 I will send that. I am willing to provide presentations as guest speaker. 2/11/2013 3:54 PM

16 I don't see the books by Beth Kanter: "The Networked Nonprofit" and "Measuring the Network Nonprofit". I also highly recommend the Pew Internet and American Life Project website for a great deal of research regarding Internet use in the USA. http://pewinternet.org. My book! Ministry in a Digital Age, Intervarsity Press, David Bourgeois. Comes out in May.

2/8/2013 7:38 PM

17 For me (Walker Tzeng), my area of expertise in in the area of education technology and tools used in teaching online. If a professor needed help in this area I would be happy to advice, provide articles, or present if requested.

2/8/2013 2:01 PM

18 You are probably in touch with Antoine J Wright, and others in the Mobile Ministry Forum. I have books listed at www.ieday.net/books.php and free ebooks at www.ieday.net/eb which I hope could be useful. I'm always trying to blog about new developments and resources at www.ieday.net/blog At Internet Evangelism Day, we'd also tried to develop a list of potential speakers for meetings, conferences and seminars, and although their have not been many takers, I could give you access to that list, or choose people that might particularly match particular needs for your courses.

2/8/2013 12:44 PM

19 This would take me the rest of the day, and probably beyond, to respond to. The literature is rich, the websites many, etc. What may be more important is the monitoring activity on the topics, as changes are occurring all the time, especially in the field of neuroscience that is beginning to look into how media "rewires" the brain. See Nicholas Carr's "The Shallows" on that, as well as many other resources. I would certainly be willing to help as I can with several of these courses. Quentin Schultze at Calvin College might be willing, too. Clifford Christians (Illinois) would be especially good on the philosophy of technology.

2/8/2013 10:40 AM

20 John Smart, http://www.accelerating.org/ he is not a Christian, but is an emerging technology futurist. He developed that masters degree I mentioned. I know him, as an acquaintance, but not as a close friend. I would invite him in, once you got your recordings systems down for webinars, and see what he can do, or if he would do something on a pro bono basis.

2/7/2013 2:07 PM

21 Well, I would be willing but within the context of message development. 2/7/2013 2:05 PM

**Q4 The intent of our strategy is to target the intersection of our strengths with the need, and to focus on that target market initially and expand from there. Do you believe that we have identified the right target market? Based on what you understand of the opportunity in this space, how would you suggest changing the target market?**

**Answered: 21 Skipped: 1**

**# Responses Date**

1 Not sure.. 3/15/2014 9:07 PM

2 Your outward/inward and leadership assumptions seem to be at odds with each other. Outward focus for ministry demands leadership capabilities. Those who "would rather focus on tech than people" are missing the point entirely. They don't have to be a CT, CI, or CEO to lead. Equip them with people skills, ministry skills, just as much as you teach them about tech.

3/13/2014 4:38 PM

3 You might consider targeting undergraduate students at Christian Universities looking at graduate school opportunities.

3/13/2014 12:26 PM

4 I think the target market you've described is right on target. It would be helpful for prospective students to have concrete descriptions of what they will be able to do after they receive their degree.

6/12/2013 8:00 AM

5 IT is clearly the dominant tech market. However, it also means that it is very large since IT touches every industry. The kind of IT used in mobile/cloud computing for personal social apps is not at all the same as the kind of IT used in finance or biotech. Somewhere in between there are big data for market analytics, for security, for energy research, for transportation/logistics, for manufacturing, for consumer electronics, for healthcare etc. The underlying economic forces is not at all the same. So once the industry specific economic topics are to be factored in, which seems appropriate given that 40% of the target students are on C-level track, that seems a little bit too broad. So my suggestion would be to develop the focus initially around a handful of vertical industries where a Christian perspective makes a bigger difference. For example, the Christian perspectives on human relationship might have a bigger role to play in service-based industries rather than commodity or manufacturing sectors.

6/11/2013 11:22 AM

6 It seems right. This is not a population that I intimately work with so am not sure about the framing and complete strategy.

3/10/2013 12:36 PM

7 I am not familiar with this realm of specialization and can't offer any constructive comments. A general observation is that this is an extremely relevant ministry need as more churches and mission organizations intend to more effectively use opportunities that the Internet provides.

2/26/2013 4:33 PM

8 About right.... you won't get any pastors at all, maybe only a few missionaries.. 2/22/2013 3:25 PM

9 This seems to be very clear 2/21/2013 7:19 AM

10 Sounds like you have identified the right target market. I suggest you enhance the target market by building in reference to the approx 70% (my guess) who will likely encounter the ministry or secular situation of having to operate or lead within a multi-organizational or cross-organizational environment. This is why gaining collaborative expertise is of the essence. Relatively few people entering careers in the coming years with be working exclusively within ONE organization; they will have to know how to work and provide leadership in alliances, networks, partnerships and more. They may find their sponsoring/employing organization releases them to provide STEM/Tech expertise to an entire set of organizations/ministries. Welcome to the connected world.

2/20/2013 7:17 PM

11 Seems like a good place to start 2/18/2013 8:06 PM

12 Those numbers seems like a good broad guess that you'd just keep evaluating every year. Again, if you're thinking 50% and growing will be in secular employment, it's likely their working biblical and theological knowledge may require some remedial work.

2/18/2013 8:28 AM

13 I take some issue with the Leadership estimate. Technologists will always be in some leadership role. I have seldom met someone who is truly just a techie. :-) Daniel Goleman (Working with Emotional Intelligence) points out that leadership is often context driven. Whoever has the needed knowledge at a critical moment will be in a leadership role.

2/15/2013 3:16 PM

14 The difficulty is that the degree itself will primarily only have value when working for a Christian organization. The content will help everyone, but someone in a secular job probably won't even list this degree on their resume. So I think a good number of the people taking the classes will be people that value the content, but not be as motivated to complete the degree. If you add more of an emphasis on the practical how to live out your life within a secular work environment, it will attract more of the people in current secular jobs. This segment of society is an order of magnitude more than those currently in technical ministry occupations. I think it would be wise to move as quickly as possible into that segment of society (i.e. Christians working in secular STEM careers).

2/13/2013 9:23 AM

15 Sounds good. 2/11/2013 3:58 PM

16 You may have a split target here. 1) Those who started STEM careers and want to switch to ministry, and 2) Those who went into ministry and now see a need to understand digital ministry. You may want to go with two different degrees here, or maybe create some "leveling" courses for those in group #2.

2/8/2013 7:39 PM

17 You may want to do a bit more research on age-based background as I believe this is a large target market. I think you will find many older generation or retired techies who worked professionally in corporations in the past, but are now interested in serving in ministry.

2/8/2013 2:24 PM

18 As far as I can tell, I think you have identified a target market that you can serve. You could possibly get input from the mission IT people at www.yahoogroups.com/group/iccm if you have not already engaged with them. They would represent people primarily doing IT support for their organisations (rather than direct evangelism) but as people who understand the needs of the wider world. I think I already mentioned Courtney Roes (GEM) as someone you might approach, and you are probably in touch with him.

2/8/2013 1:06 PM

19 I think the identified target market will work, but not entirely. Many churches have media as part of their technical need, and people in IT are typically not the best people to know how to employ media effectively, even sometimes in quasi-IT fields such as social networking. SN is a communication problem, not a technical one, so you may be missing out on a potential target market there.

2/8/2013 10:50 AM

20 I think you got it. 2/7/2013 2:27 PM

21 From the perspective of your existing courses, yes. 2/7/2013 2:07 PM

**Q5 What do you believe would be the major motivation for Christians working in Christian ministries to participate in this program? How well do you believe that this program would meet this need prepare people to serve in a tech position in Christian ministries? How would you change it to better prepare them? Additionally, if you are with a Christian organization: 1. How well would this program prepare people to serve in tech positions in your organization?2. If one of your staff asked to participate in this program, what would it take to make this program something that you would be willing to invest your organization's time and money to make that worthwhile?**

**Answered: 21 Skipped: 1**

**# Responses Date**

1 Lead in technology use and integration in ministry and/ or a STEM field. Think the program stands along as far as it's worth. Think equips very well.

3/15/2014 9:07 PM

2 ACU's College of Business Administration and their IT Department are already doing much of this work. I would recommend contacting them to get their perspective. I would also adjust the program to include at least basic theological education - Bible, ministry, leadership.

3/13/2014 4:38 PM

3 Cost would have to very reasonable for IT staff at my institution to consider participating in the program. 3/13/2014 12:26 PM

4 Same as above. How will this degree make this person more effective in my organization? Concrete examples. 6/12/2013 8:00 AM

5 1. I'd say it'd be very helpful especially to recent graduates who come from a purely technical background with little exposure to liberal art education. 2. Most probably.

6/11/2013 11:22 AM

6 Again, it is hard to tell due to limited access to syllabi. I am guessing the target population will desire a balance between practical skills & strategies with some theoretical and theological relection. I think the key will be in how you not only organize material but the activities and assessment exercise so that they are relevant to the skills they will want to develop, and help them develop strategic plans and resources to link teaching on theology and ethics to practical ministry outcomes.

3/10/2013 12:36 PM

7 5. Whether a church or mission organization aims to engage a local community, a nation, or the world, these skills are very important. Having a broad understanding of the social, theological, and technological issues that surround ministry engagement helps achieve the desired outcomes for such programs. If ministry leaders understood the importance of this broad knowledge and also how this program helps prepare students to serve the Church in this way, I am confident there would be strong appeal/demand. Also, being equipped with cultural awareness and sensitivities appropriate for the target audience will certainly prove beneficial. 1. My organization primarily focuses on a Christian audience and while this program would be beneficial to tech staff, it would be best for those who are tasked with engaging a broader, global audience would find this very useful. 2. I would need to see the benefits: equipping staff for cultural, missional, and tech specialized work and engagement, and know this is a worthy expense in order to professionally prepare my team and make the mission effective.

2/26/2013 4:33 PM

## Appendix E. Assessment Plan for City Vision College

Note: this is the formal assessment plan that was developed for City Vision College as a part of this Doctoral Program. It is written in a format to be useful to City Vision’s stakeholders as well as DETC.

### Institutional Profile

#### Institutional History

City Vision College is the accredited Internet-based distance learning program of TechMission. Its mission is to develop a community and a technology and educational platform to equip Christians to transform at-risk communities in Jesus’ name.

The original curriculum for the college was developed in 1990 as a joint Urban Ministry degree program offered by Grace University in Omaha, NE and the Association of Gospel Rescue Missions. The AGRM, founded in 1913, is an association of over 300 ministries that each year serve nearly 42 million meals, provide more than 15 million nights of lodging, bandage the emotional wounds of thousands of abuse victims, and graduate 18,000-plus individuals from addiction recovery programs. In 1998, the AGRM established its own distance learning program using these courses and called it "Rescue College." In the years that followed, the curriculum was further expanded to create the degree completion program; a Bachelor of Arts in Missions with an urban ministry emphasis. The college was accredited by the Distance Education and Training Council in 2005. A curriculum expansion in 2006 created two separate tracks for the Missions program: nonprofit management and urban ministry. In 2007, City Vision College received Title IV deferral only status with the US Department of Education.

In 2008, AGRM decided that Rescue College could be more effective if it served the larger Christian social services market rather than just rescue mission workers. Because of that, AGRM transferred ownership to the Christian nonprofit TechMission, which is based in Boston. The name was changed to "City Vision College." New facilities for the academic operations were established in Kansas City, Missouri with marketing, IT and financial functions performed by staff in Massachusetts.

In fall 2008, City Vision College began to offer an Addiction Studies program in partnership with the NET Institute which can be taken in either a degree completion format to earn a Bachelor of Science or as a certificate program. It provides training in the Twelve Core Functions of the Substance Abuse Counselor and is intended to prepare students to attain the Certified Addiction Counselor credential in the states in which they reside. In 2010, City Vision was approved to offer a Bachelor of Science degree in Nonprofit Management.

TechMission was founded in 2002 with the values of Jesus, Justice and Technology. Its mission is to empower others to transform at-risk communities in Jesus’ name through technology. TechMission’s first program was the Association of Christian Community Computer Centers (AC4) with over 500 member ministries focused on addressing the digital divide. Since then, TechMission developed additional programs including: the TechMission Corps AmeriCorps program; ChristianVolunteering.org, an online volunteer matching website and UrbanMinistry.org, which provides over 100,000 free training resources for Christians serving the poor. In 2012, TechMission:

* Matched 9,995 volunteers through ChristianVolunteering.org & programs
* Funded 65 full-time interns serving 3,821 at-risk youth through TechMission Corps
* Served over 1.4 million unique visitors to UrbanMinistry.org & other websites
* Provided accredited college courses with 357 student registrations through City Vision College
* Provided $10.3 million in resources to sites only spending $1.5 million (674% return on investment)

TechMission and City Vision have been going through some significant transition. In 2011, TechMission decided to end its 9-year grant with AmeriCorps due to AmeriCorps changing values becoming in conflict with TechMission’s goals. This would allow TechMission to focus much more on City Vision in the future. As a part of this effort, TechMission is replacing the TechMission Corps AmeriCorps program with a City Vision Internship program and launching a Master’s program. A major goal of this document is to develop an assessment plan to provide ongoing assessment and help set the direction of the organization.

### Institutional Organization

TechMission and City Vision have three teams: City Vision, Operations, Tech Team/Online Services. Operations and the Tech Team support the other two teams by providing financial/operations support and technical support respectively. Tech Team/Online Services (ChristianVolunteering.org & UrbanMinistry.org) and City Vision are programs of TechMission. The Undergraduate Dean oversees all undergraduate faculty. Other staff report to the President who reports to a Board of Directors.

Jonathan Spain- Collins

Online Support

### Purpose of Assessment

City Vision is committed to accountability and continuous improvement for the success and satisfaction of its students, faculty and staff. The purpose of assessment in City Vision is to provide a framework for the continuous improvement of academic, administrative and educational support systems in the achievement of its mission. City Vision uses assessment to make changes to the curriculum such as the sequence of courses, changes to pedagogical practices such as presenting information differently, and changes to student requirements such as requiring entry assessment testing to determine whether remedial education is needed.

In addition to our internal assessment process, we are also required to provide assessment data to various agencies which include:

* Distance Education Training Council (DETC).
  + C.9 Policy on Degree Programs. Standard V: Student Achievement and Satisfaction
  + C.14 Policy on Student Achievement and Satisfaction
* Missouri Department of Higher Education (MDHE).
* US Department of Education (IPEDS)

### Institution, Mission, Goals and Objectives

### Description of Mission, Values, Goals and Objectives

City Vision College is a division of the Christian nonprofit organization TechMission, Inc. which has the mission to empower others to transform at-risk communities in Jesus’ name through technology. **The mission of City Vision is to develop a community and a technology and educational platform to equip Christians to transform at-risk communities in Jesus’ name.** This mission statement both sets the direction for the organization in what we will do, and functions as a boundary of what we will not do.

**Values**

Compared to other organizations and colleges, there are several aspects that make our organization unique which are articulated in our values:

**1) Jesus.** We desire Jesus to be central in our individual and corporate life. We seek to follow him—in his identification with the poor, the afflicted, the oppressed, the marginalized; in his challenge to unjust attitudes and systems; in his call to share resources with each other; in his love for all people without discrimination or conditions; in his offer of new life through faith in him. From him we derive our holistic understanding of the Gospel of the Kingdom of God, which forms the basis of our response to human need. This is best summarized in the following principles within our Jesus value:

**Biblically-based Christian Diversity.** The foundation of all that we believe is the Bible. As we follow Jesus we are called to help make and disciple other followers of Jesus. We follow an evangelical statement of faith and have a Protestant heritage, but we wish to partner with and equip people from all branches of the Christian faith including Protestant, Catholic and Orthodox traditions. We will maintain our identity as Christian, while being sensitive to the diverse cultural contexts in which we express Christian identity.

**Holy Spirit Empowered.** We believe that to strive toward this goal, our work must be Holy Spirit empowered. God acts powerfully today and spiritual gifts are an important part of our walk with Jesus.

**Christian Recovery.** We have strong ties to the Christian counseling and recovery movement and want to empower this movement. We believe that this movement represents a very practical way to bring Christ’s healing to the world. We value social healing which is a path of holiness that involves becoming in touch with our own brokenness and the pain of the world in a way that enables the Holy Spirit to transform ourselves and the world.

**2) Justice**.

We are called to serve under-resourced people of the earth; to relieve their suffering and to promote the transformation of their condition of life. This is best summarized in the following principles within our justice value:

**Indigenous Leadership Development.** Our goal is to empower ministries that are indigenous to the communities they are serving. We believe we are called to pursue genuine reconciliation across race, class, gender and ethnicity. Our organizational values and culture should reflect those we are serving and other stakeholders in order to most effectively achieve our mission.

**Charity and Systemic Justice.** Our goal is to empower the social justice and charity traditions of the global Church. We believe that both charity (giving to one person at a time) and justice (changing systems to be more just) are needed. We believe that we are called both to provide holistic ministry to individuals and to work towards changing of systems that enable injustice.

**Holistic Needs**. We follow the Lausanne Covenant’s belief that Christians cannot Biblically separate spiritual needs from emotional/physical needs, and that Christians must follow Jesus’ example to meet both. We view ourselves as distinct from the Social Gospel tradition, which values physical needs more than spiritual, and any fundamentalist position that values spiritual needs to the exclusion of the physical.

**Thrift.** We are stewards of God’s resources provided to us to help bring maximum benefit to those we serve. As we serve the poor, it is important to value resources as they do. Often this translates into a strong emphasis on efficiency while balancing the needs of our staff and other stakeholders.

**Educational Access.** We focus both on equipping Christians in social service careers and providing education to those who traditionally might not have access to it otherwise. Because of our justice focus, we endeavor to reach students who might not otherwise be able to go to college and to provide a low-cost, low-debt option for those pursuing careers in Christian social services and social entrepreneurship.

**Practical Education.** We are uniquely called to focus on practical education. We believe that too often Christian colleges equip students academically and theologically, but they do not equip them with practical tools needed to transform lives in at-risk communities. Our goal is to provide practical education needed for Christians to transform the world.

**3) Technology**. At our current point in history, technology seems to be the most significant natural factor changing the world. Unfortunately, Christians often resist technology. We are fighting battles against injustice, but are using antiquated tools. As the world is being transformed by society, we are called to help equip the church to be able to respond with tools and technologies needed to effectively engage in the fight for justice. We have a unique role in the Global Body of Christ to specialize in providing technology resources to the rest of the Body to enable holistic transformative ministry. People should always come before technology, which is only a tool to help empower and transform people.

**Culturally Appropriate Technology.** We value utilizing tools to meet actual needs in culturally relevant ways, and to do this, we must strive to be close to the needs of the cultures we are trying to serve.

**Technology to Promote Access**: While technology often creates growing social divides, it can also be used to bridge those divides. We use innovations like online education and open content to equip Christians in social service careers by using technology to expand access to practical education to students that might not have such access otherwise while maintaining high academic standards.

**Christian Technologist Leadership Development**: we equip Christians from the Science, Technology, Engineering and Math (STEM) professions to use their skills for ministry and to transform the world.

**Innovation and Reimagined Applied Research.** We are a testing ground for technologies and innovations that could help bring Justice to the world in Jesus’ name. Too much of academia has focused on producing articles on topics that do not matter in journals that are not read. We believe that colleges and universities are in the knowledge production business. The end value of that knowledge is the product of its practical impact times the number of people affected by it. With this understanding, we invest heavily in open access to knowledge and connecting people to effectively transform the world. We do that currently through our online wiki, audio and video archive as well as the Christian Social Graph of open Christian data. We view the world as our research lab, and TechMission and City Vision serve as an incubator for developing projects to use technology to transform the world. These projects then increase the visibility of City Vision and serve as a mechanism to increase student enrollment.

**Goals and Objectives**

The following is a list of the goals of City Vision:

**Goal 1: Christian Social Service Education**: to provide practical undergraduate education to Christians to equip them in their field in social service and social entrepreneurship careers.

* Objective 1. Improve the quality of all undergraduate educational programs.
* Objective 2. To Meet Program Level Goals and Objectives that are listed in the Program Assessment Plan Section (below)

**Goal 2: Technology & Ministry Education**: to provide practical graduate education to Christians from the Science, Technology, Engineering and Math (STEM) fields to use their skills in ministry and business to bring transformation to the world.

* Objective 1. Receive Accreditation for Master’s in Science, Technology and Ministry Program
* Objective 2. Improve the quality of all graduate educational programs.
* Objective 3. To Meet Program Level Goals and Objectives that are listed in the Program Assessment Plan Section (below)

**Goal 3: Replication**: to equip other leaders and organizations in developing their own online training and educational programs through graduate education and consulting to further our mission through replication.

* Objective 1. Develop proposal to DETC for a Doctoral program to train leaders in developing their own online training and educational programs
* Objective 2. Receive approval from DETC for a Doctoral program to train leaders in developing their own online training and educational programs
* Objective 3. Partner with organizations through consulting relationships to provide an effective platform of technology and content to empower their own online training and educational programs
* Objective 4. Launch joint enterprise with ILS Nova for online Adult Education, GED and Job Readiness System. (Note this is a non-accredited program of TechMission and is not related to City Vision)

**Goal 4: Faculty and Staff**: to develop faculty and staff to support their own professional development and calling to enable them to provide effective education to our students and further our mission.

* Objective 1. Recruit and train enough quality staff and faculty to support the program
* Objective 2. Use Master’s program to build the capacity of staff both in their work at TechMission and as a part of their own professional development

**Goal 5: Internships**: to provide opportunities for students to gain practical hands-on experience through internships while serving as a resource for ministries serving at-risk communities.

* Objective 1. Develop City Vision Internships program as a “work-study” program where service is in the community
* Objective 2. Develop Technology and Ministry Internship program
* Objective 3. Develop Internship Practicum Courses for each of our degree programs for review and approval by DETC and develop academic internships component of City Vision internships

**Goal 6: Stewardship**: to provide effective accounting, finance and administrative support to City Vision’s programs and services in a way that reflects our values and achieves our mission

* Objective 1. Improve the efficiency of our financial aid office by working with a new vendor and by hiring new financial aid staff
* Objective 2. Perform risk assessment on student loan default rate to make decision on whether to continue student loan program in 2014-15.
* Objective 3. To continue to have successful audits with an unqualified opinion (no findings) by an outside auditing firm.

**Goal 7: Expanded Enrollment**: to significantly expand enrollment in undergraduate and graduate programs

* Objective 1. Expand course registrations to 400 undergraduate student starts in 2014.
* Objective 2. Launch graduate program with at least 10 Master’s students enrolled.

**Goal 8. Applied Research:** to serve as an incubator for developing projects to use technology and training to transform the world.

* Objective 1. To place at least two Technology and Ministry interns at our headquarters in 2014.
* Objective 2. To expand our Christian social graph to have over 500,000 organizations, volunteer opportunities, Christian jobs, content items and other items

**Goal 9. Service**: to provide an open platform of technology and training to enable the global Christian community to transform at-risk communities.

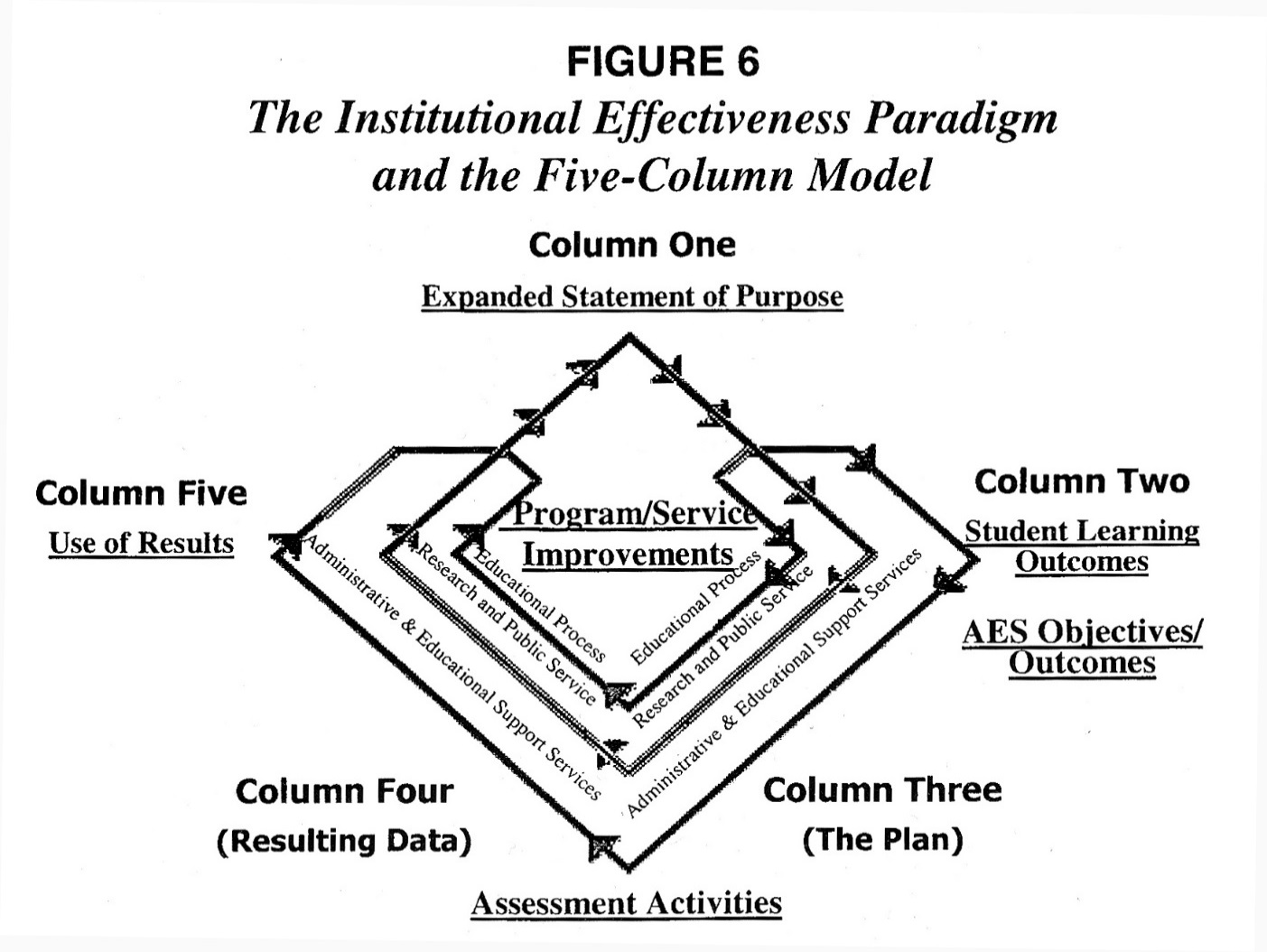
* Objective 1. To serve over 1.3 million visitors to our websites for Christians serving the poor in 2014
* Objective 2. To match 10,000 volunteers through our websites and programs in 2014.
* Objective 3. To develop an updated media website and mobile apps with our open content through UrbanMinistry.org.

**Goal 10: Financial Growth:** to secure significantly increased resources enabling City Vision to add new programs, expand existing programs and further its mission.

* Objective 1. To expand City Vision and TechMission’s earned income to over $400,000 in 2014.
* Objective 2. To maintain City Vision and TechMission’s donation income to be over $100,000 in 2014.

### Assessment Process

#### Review of Mission, Goals, Objectives, Policies



For our assessment process, we use the Institutional Effectiveness Paradigm and the Five-Column Model from *A Road Map for Improvement of Student Learning and Support Services through Assessment.* The first column in this model is the Expanded Statement of Purpose which includes the organization’s mission and goals. The second column of Student Learning Outcomes comes out of these mission and goals. The third column of Assessment Activities list the means of assessment and criteria for success. The fourth column reviews Resulting Data, and the fifth column explains the use of these results. An example of this can be seen in the Program and Unit Assessment section of this document.

The mission serves both as a guide on what the organization should do and a boundary on what it should not do. All goals and objectives must align with the mission. The goals provide high level direction for units of the organization, while objectives should be measureable. Each unit of the organization will have key performance indicators that provide quantifiable data on that unit’s performance. Together the mission, goals and objectives make up column 1 of this model. Each year, the President works with the Undergraduate Dean, faculty and staff to prepare the goals and objectives for review by the board at its strategic planning meeting each fall. The board then reviews the mission statement and provides input into the goals and objectives. Once the goals and objectives are finalized, that is then fed into strategic steps and milestones. Those then inform team and individual work plans and specifications.

The President and the Undergraduate Dean work with the faculty to develop an assessment plan using the five column model described above for each of our degree programs. The Program Level Outcomes (PLOs) for each degree program tie back to the goals, objectives and mission statement of the organization. Each of our courses has Course Level Outcomes (CLOs) that support the PLOs. Each course will typically have Unit Level Outcomes (ULOs) that support the program level outcomes. The means of assessment in the third column will focus on direct assessment for the PLOs. Other measures of quality from indirect and attitudinal surveys are reflected through the Key Performance Indicators. The assessment results are fed into the Situational Assessment stage of the Strategic Planning Process as described below. Each unit is responsible for compiling and reporting its own assessment data either on the calendar year or academic year (depending on the data set). Those are discussed within each division and then fed into the institution’s assessment plan and strategic plan.

#### Publication and Distribution of Mission, Goals and Objectives

Once approved, our Mission, Goals and Objectives are distributed through multiple channels. They are published on our website and included in our student catalog. Our Mission, Program Level Mission, PLOs, and CLOs are included in all new course Syllabi. The responsibility of this distribution belongs to the President and Chief Academic Officer.

#### Advisory Councils

City Vision has advisory councils for our undergraduate and graduate programs. Because our undergraduate programs are in related fields we only have one advisory council, and our graduate program only has one degree. The advisory council meets at least annually, and provides City Vision with advice on the current level of skills, knowledge, and abilities individuals need for entry into the occupation, as well as the adequacy of the institution’s educational program objectives, its curriculum, and its course materials. Our advisory councils consist of academic and practitioner leaders in related fields that can help direct and ensure the quality of our programs.

### Implementation of Mission, Goals and Objectives

#### Means of Assessment

##### Processes

As described above, we use the Institutional Effectiveness Paradigm. Our President and Chief Academic Officer work with staff to develop updated goals and objectives each summer. These are then used to update our means of assessment, program level outcomes and course level outcomes. The overall strategic plan and assessment plan are discussed and reviewed by our Board at an annual planning meeting in September. The President then reports to the board at quarterly meetings. Our faculty members who serve as course developers will align the course level outcomes with the program level outcomes which are tied to our institutional objectives and goals. Our adjunct teaching faculty typically stay within the existing course level outcomes, but may provide input into the modification of those outcomes. We collect data using our means of assessment on an ongoing basis depending on where students are in their process. We compile most of our data on a calendar year. The assessment results then feeds into our annual assessment and strategic planning process as described below.

##### Direct Measurement Tools

###### Student Assessment in Courses

Students are assessed through quizzes, online discussion group assignments and papers. Most of our courses utilize a comprehensive final project where students demonstrate their mastery of principles taught in the course. Each course has unit level objectives and course level objectives that are measured through the above means. The course level objectives support the program level objectives in the degree program as shown in the Unit Assessment Section of this document.

###### Action Items on Direct Measurement Tools

As a part of our assessment plan, City Vision is conducting research in additional outside measures to use in our assessment process. These include the following: Sample Certification Examination for Addictions Counselor Certification, Certified Technology Manager, Early Childhood Education, Certified Public Accountant Exam and Certified Fund Raising Executive. Our goal is to consider how well these outside measures can be used with our existing program and to make recommendation to use them as a part of our assessment process. Our goal will be to have recommendations in 2014 and to begin implementation in 2015.

##### Indirect Measurement Tools

###### Student Satisfaction Survey

Our Accreditor requires that we conduct a Student Satisfaction Survey for all students after completing a course asking the following questions:

1. Did you achieve, or will you have achieved upon completing your studies, the goals you had when you started this course?

2. Would you recommend this course to a friend?

3. All things considered, were/are you satisfied with your studies with City Vision College?

We use this data to assess student satisfaction and identify courses needing improvement. If any course has less than 75% responding “yes” to any of these questions, we develop a plan for corrective action. The following is a sample of the data collected for our top 10 courses in 2013.

In addition to the required questions by DETC, we also ask our students the questions at the end of each course (see Appendix A).

###### ii. Course Completion Rates

We also monitor the completion rates for students in each of our courses both to meet DETC’s requirement and for our own assessment process. We consider a student a “start” if they complete the assignments for the first two weeks of a course and have completed all steps in their admissions process (otherwise they are a cancellation). If any courses have a completion rate of less than 75%, we develop a corrective action plan. The following is an example of our Course Completion Rates report for 2012 for our top 10 courses.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Name of Course | Date of Sample | # of Students in sample | # of Cancellations | # of Active students in sample | # of students completing | Completion Rate  #/% |
| Course 406 - Joy at Work | 2012 | 24 | 6 | 18 | 15 | 83.3 |
| Course 416 - Mental Illness and Addiction | 2012 | 20 | 3 | 17 | 13 | 76.5 |
| Course 419 - Family Issues and Recovery | 2012 | 19 | 4 | 15 | 14 | 93.3 |
| Course 306 - Managing Residential Recovery Programs | 2012 | 18 | 4 | 14 | 11 | 78.6 |
| Course 330 - Introduction to Urban Youth Ministry | 2012 | 18 | 4 | 14 | 13 | 92.9 |
| Course 404 - Case Management | 2012 | 18 | 4 | 14 | 11 | 78.6 |
| Course 412 - Counseling Foundations | 2012 | 17 | 7 | 10 | 8 | 80 |
| Course 415 - Professional Practices | 2012 | 14 | 4 | 10 | 9 | 90 |
| Course 417 - Group Counseling Practices | 2012 | 14 | 3 | 11 | 10 | 90.9 |
| Course 303 - Financial Accounting and Reporting | 2012 | 13 | 1 | 12 | 9 | 75 |
| AVERAGE RATE | | | | | | 83.7 |

###### Program Graduation Rates

We also track the degree completion rates of students in our degree programs. We consider a student degree seeking if they 1) have completed all admissions requirements 2) have successfully completed 4 courses and indicated that they plan to pursue a degree. Our graduate rate for each degree programs must not fall below 15 percentage points of the mean of our cohort of peer institutions defined by DETC. If any degree program falls below this, we will develop a corrective action plan. Below is a sample of our program graduation rates for 2013 based on our cohort that started in 2011:



###### Graduate Interview & Employment Reporting

We interview all graduates after they graduate to determine whether they are placed in a job and whether it is in a field related to their degree. This information is a part of our required reporting to the Missouri Department of Higher Education. We use this information to assess the effectiveness of our program in placing graduates in jobs. The following is an example of this data from 2013 using the 2011 cohort.

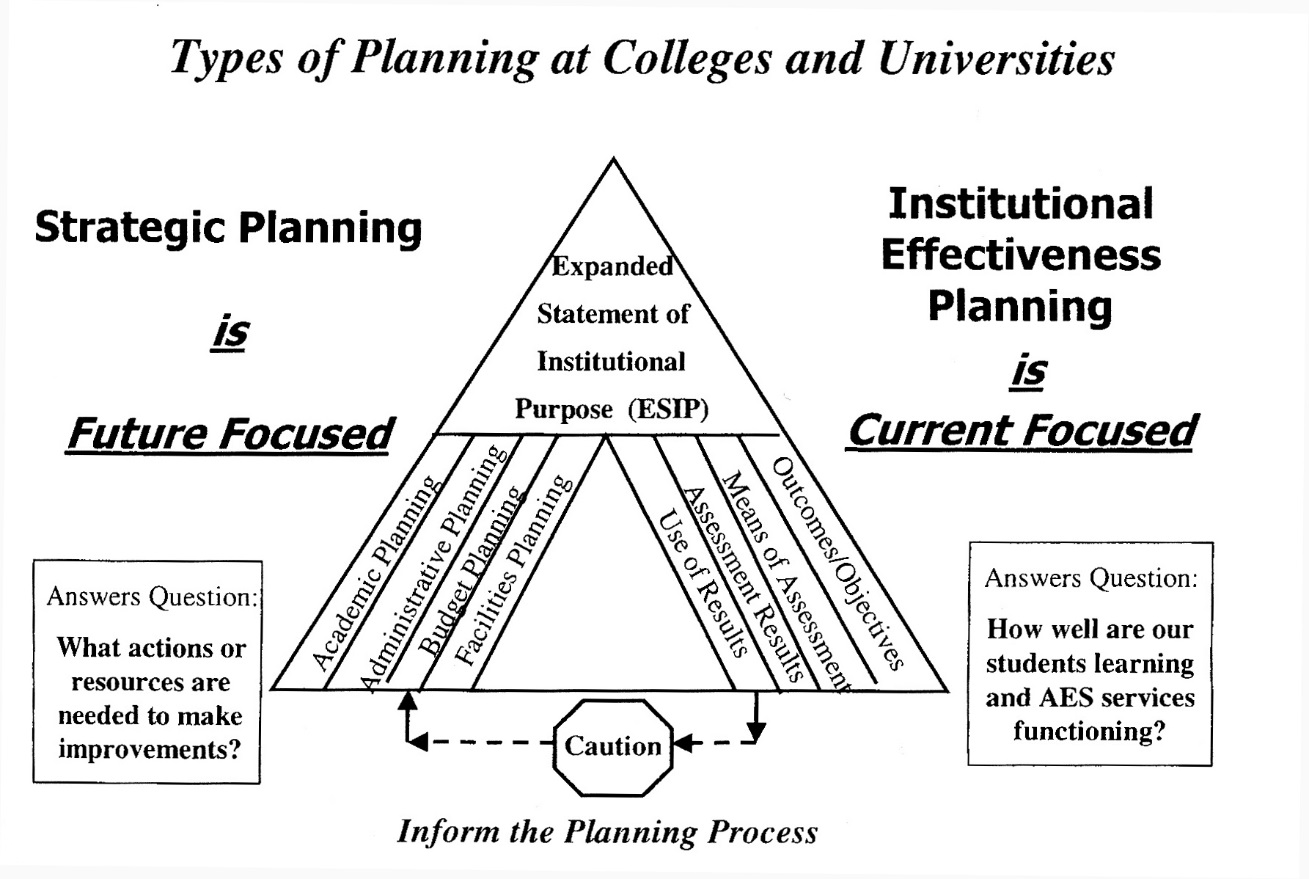


###### Action Items on Indirect Measurement Tools

* **Research Additional Tools**: As a part of our assessment plan, City Vision is conducting research in additional outside measures to use in our assessment process. These include the following: National Survey of Student Engagement and Multidimensional Measure of Religiousness/Spirituality. Our goal will be to have recommendations in 2014 and to begin implementation in 2015.
* **Revise End of Course Survey:** We will revise our end of course survey to make it shorter to further improve response rate.
* **Entrance Placement Assessment Exams**: This assessment planning process has helped us to realize that our entering students have a wide range of abilities when they enter City Vision. Based on this, we will conduct research on potential standardized tests to assist us in the placement of students in courses. Some of the exams we will consider include: Accuplacer by the College Board, ASSET by ACT, COMPASS by ACT.
* **Mid Program Assessment Tests**: As a part of our assessment planning process, we will also research standardized tests for assessing students in the middle of their degree program. One test to consider is CAAP by ACT among others.
* **End of Program Assessment Tests.** As a part of our assessment planning process, we will also research standardized tests for assessing students at the end of their degree program. Some test include: The Accounting and Early Childhood Development Job Ready Series of Tests by NOCTI.
* **Exit Interviews/Surveys for Graduates and early exited students.** While we have a very basic exit interview for our graduates, as a part of our assessment planning process, we will also research more formal exit interview and surveys for graduates and early exit students. We currently ask a few questions for early exit students listed on the form at: <http://www.cityvision.edu/cms/cv/drop/college> and for course drop students at: <http://www.cityvision.edu/cms/cv/drop/course>
* **Alumni Interviews/Surveys.** We currently do not have a formal interview or survey process with alumni. As a part of our assessment planning process, we will also research more formal alumni interviews and surveys.
* **Employer Interviews.** We currently do not have a formal interview or survey process with employers. As a part of our assessment planning process, we will also research more formal employer interviews and/or surveys.
* **Faculty Surveys.** We currently do not have a formal interview or survey process with faculty. As a part of our assessment planning process, we will also research more formal faculty interviews and surveys.
* **Board and Advisory Board Surveys.** While we have had a self-evaluation process for our board, it could be improved. As a part of our assessment planning process, we will also research more formal surveys for our board and advisory board.
* **Interns and Internship Sites.** While we have had a very formal process for evaluating our interns, we need to adapt it to collect more information from interns and internship sites that will enable us to improve the program.

The President will take the lead on this project with support from the Undergraduate Dean, Registrar and Tech Team.

#### Role of Mission, Goals and Objectives in Strategic Planning



We follow the Institutional Effectiveness Planning model of assessment. In this model Assessment results are fed into the situational assessment stage of the strategic planning process as shown in the adjacent diagram.

The mission statement of the organization serves both as a guide on what the organization should do and a boundary on what it should not do. All goals and objectives must align with the mission. The goals provide high level direction for units of the organization, while objectives should be measureable. Each unit of the organization will have key performance indicators that provide quantifiable data on how that unit performs.

#### Roles in Keeping Goals and Objectives Current

The assessment results are fed into the Situational Assessment stage of the Strategic Planning Process as shown above. Each unit is responsible for compiling and reporting its own assessment data either on the calendar year or academic year (depending on the data set). Each division is also responsible for conducting its own Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis each summer. Those are then fed into the institutional SWOT analysis. The situation assessment results (assessment results and SWOT analysis) are then fed into the planning process for the next year’s goals, objectives and key performance indicators. Those are discussed within each division and then fed into the institution’s plan. The President then prepares the goals and objectives for review by the board to provide input into its strategic planning meeting each fall. Once the goals and objectives are finalized, that then is fed into strategic steps and milestones. Those then inform team and individual work plans and specifications.

#### Examples of Use of Assessment Results

We use assessment results to make both operational and strategic adjustments in our plans. Some examples of this include:

**Faculty/Course Level Adjustments.** From our student satisfaction surveys and completion rates, we identified that one of the faculty who was teaching Group Counseling and Counseling Alcoholics was not performing, so we replaced her.

**Adjusting Means of Assessment.** Through our assessment planning, we found that our response rate on our end of course survey was low, which was causing unreliable data for courses with smaller enrollments. Because of this, we have made an adjustment where completing the survey is required for students to receive their final grade. In addition, we are planning to revise the survey to make it shorter to further improve response rate.

**Program Level Adjustments.** In our assessment planning, we identified that while our Addiction Studies program is focused on getting students prepared for the Certified Addiction Counselor exam, it primarily does so by preparing students for each part of the exam separately. Our planning process helped us to identify the need for a capstone course that brings the different topics together, assists students directly with the exam and seeking employment, so we are investigating adding such a course to our program. We believe that this would enable us to use our student’s performance on the Certified Addiction Counselor exam as a part of our assessment process.

**Institutional Level Adjustments.** In reviewing how our degree programs are aligned with the mission and values of TechMission, we identified that the programs did not adequately reflect the technology value of TechMission. Based on this, we decided to develop a Master’s Program in Technology and Ministry to better align City Vision with TechMission’s mission and values.

#### Key Performance Indicators in Achieving Mission, Goals and Objectives

**Academic Performance Indicators**

* **Student Satisfaction Rate.** At least 75% of students completing a course would provide a positive response to the three survey questions for all courses. Responsibility:Undergraduate Dean. Goal 1 & 2.
* **Course Completion Rate.** At least 75% of all student starts will complete each course. Definitions: Student Start is a student who completes their assignments for the first two weeks and has completed all the necessary requirements to enroll. Responsibility:Undergraduate Dean. Goal 1 & 2.
* **Degree Graduation Rate.** At least 50% of all students who are considered a degree start will complete their degree. Definition: Degree start is a student who passes 4 courses (two terms) and has completed all the necessary requirements to enroll. Responsibility:Undergraduate Dean. Goal 1 & 2.

**Growth and Resource Performance Indicators**

* **Undergraduate Enrollment.** At least 400 student course starts (at least 2 weeks completed) in undergraduate courses. Responsibility:President (primary), Undergraduate Dean. Goal 7.
* **Graduate Enrollment.** At least 10 full-time equivalent Master’s students. Responsibility:President. Goal 7.
* **Cost Per Lead.** Goal: to be determined. Responsibility:President, Tech Team. Goal 7.
* **Lead to Enroll/Register Rate.** Goal: to be determined. Responsibility:Admissions (primary), Registrar, Student Services. Goal 7.
* **Enroll/Register to Start Rate.** Goal: to be determined. Responsibility:Registrar. Goal 7.
* **Earned Income.** At least $400,000. Responsibility:President (primary), Undergraduate Dean. Goal 7.
* **Donation Income.** At least $130,000. Responsibility:President (primary), Undergraduate Dean. Goal 7.

**Internships Performance Indicators**

* **Number of Internship Sites.** Goal: 50 internship sites by 2014. Responsibility: Internship Coordinator. Goal 5.
* **Interns.** 25 full-time equivalent interns placed in 2014 (FTE = one intern for one year). Responsibility: Internship Coordinator. Goal 5.

**Service Performance Indicators**

* **Open Content:** To provide free content to 1.3 million unique visitors to our websites. Responsibility:President, Tech Team. Goal 9.
* **Volunteers Matched:** To match 10,000 volunteers through ChristianVolunteering.org. Responsibility:President, Tech Team. Goal 9.

### Program and Unit Assessment Plans

Each of our degree programs has developed an assessment plan using the five column model as shown in Tables 1 to 4 below. The Program Level Outcomes (PLOs) for each degree program tie back to the goals, objectives and mission statement of the organization. Each of our courses has Course Level Outcomes (CLOs) that map back the PLOs as shown in table 5. Each course will typically have Unit Level Outcomes (ULOs) that support the program level outcomes. The means of assessment in the third column will focus on direct assessment for the PLOs. Other measures of quality from indirect and attitudinal surveys are reflected through the Key Performance Indicators.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Undergraduate Addiction Studies Program Five Column Model | | | | |
| Expanded Statement of Institutional Purpose | Program Intended Educational Outcomes | Means of Assessment and Criteria for Success | Summary of  Collected Data | Use of Results |
| Institutional Mission Statement:  to develop a community and a technology and educational platform to equip Christians to transform at-risk communities in Jesus’ name  Institutional Goal: to provide practical undergraduate education to Christians to equip them in their field in social service and social entrepreneurship careers. | 1. Understand the SAMHSA 12 core functions of addiction counselors to be academically prepared to become a certified addiction counselor.  2. Understand and demonstrate the essential practices of addiction treatment including screening, intake, assessment, treatment planning and aftercare. (Core Functions 1-5) 3. Understand and use basic counseling skills such as effective listening, assessment, crisis intervention, group therapy and working with other professionals (Core Functions 6, 8, 12) 4. Understand and apply basic counseling professional practices including ethics, working with various client groups, case management and record keeping skills. (Core Functions 7, 10, 11) 5. Understand and apply understanding of other issues related to addiction recovery such a mental illness, family dynamics and sexual and spiritual issues. (Core Function 9) | 80% of students shall receive a pass rate score of 70% for final projects and final exams tied to assessing educational outcomes.  Job placement rate of graduates.  Employer Interviews  Attainment rate of Addiction Counselor Credential for those seeking the credential |  |  |

**Table 1. Undergraduate Addiction Studies Program Five Column Model**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Undergraduate Nonprofit Management Program Five Column Model | | | | |
| Expanded Statement of Institutional Purpose | Program Intended Educational Outcomes | Means of Assessment and Criteria for Success | Summary of  Collected Data | Use of Results |
| Institutional Mission Statement:  to develop a community and a technology and educational platform to equip Christians to transform at-risk communities in Jesus’ name  Institutional Goal: to provide practical undergraduate education to Christians to equip them in their field in social service and social entrepreneurship careers. | 1. Understand and apply the roles and responsibilities of a nonprofit board of directors and the management team to provide governance and leadership to the nonprofit organization.  2. Understand and apply basic accounting and budgeting principles in order to successfully manage the finances of a nonprofit organization.  3. Understand and apply basic marketing, communication and fundraising principles in operating a successful nonprofit organization.  4. Understand and apply nonprofit management principles related to program development, ethics, decision-making and nonprofit legal and regulatory requirements. 5. Understand and apply the essential elements of nonprofit human resource management including volunteer management, hiring, firing, supervision and legal considerations. | 80% of students shall receive a pass rate score of 70% for final projects and final exams tied to assessing educational outcomes.  Job placement rate of graduates.  Employer Interviews |  |  |

**Table 2. Undergraduate Nonprofit Management Program Five Column Model**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Undergraduate Missions Program Five Column Model | | | | |
| Expanded Statement of Institutional Purpose | Program Intended Educational Outcomes | Means of Assessment and Criteria for Success | Summary of  Collected Data | Use of Results |
| Institutional Mission Statement:  develop a community and a technology and educational platform to equip Christians to transform at-risk communities in Jesus’ name  Institutional Goal: to provide practical undergraduate education to Christians to equip them in their field in social service and social entrepreneurship careers. | 1. Understand and apply the history, philosophical and theological basis of movements of Christians serving the poor, the oppressed and urban communities.  2. Use spiritual care skills such as preaching, counseling, evangelism and discipleship in the urban context.  3. Lead others to accomplish the missions of the organizations with which they are affiliated.  4. Understand and apply principles from the various programs that are offered to people in the urban context including addiction recovery, community development, services to the homeless, women, youth work and family ministries. | 80% of students shall receive a pass rate score of 70% for final projects and final exams tied to assessing educational outcomes.  Job placement rate of graduates.  Employer Interviews |  |  |

**Table 3. Undergraduate Missions Program Five Column Model**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Science, Technology and Ministry Master’s Program Five Column Model | | | | |
| Expanded Statement of Institutional Purpose | Program Intended Educational Outcomes | Means of Assessment and Criteria for Success | Summary of Collected Data | Use of Results |
| Institutional Mission Statement:  develop a community and a technology and educational platform to equip Christians to transform at-risk communities in Jesus’ name  Institutional Goal: to provide practical graduate education to Christians from the Science, Technology, Engineering and Math (STEM) fields to use their skills in ministry and business to bring transformation to the world | 1. develop effective technology programs in a way that takes into account the unique cultures they will be serving and how to use technology to serve the poor and cross-cultural communities 2. understand the Biblical basis, theology and historical context of technology in ministry and how to apply that in professional settings 3. understand the Christian vocation of Science, Technology, Engineering and Math (STEM) careers and their unique identity and role within their field in a way that maximizes their calling and enables Christian ministry 24/7 4. understand complex systems in a way that helps them to effectively lead others and apply technology in ministry and professional environments 5. understand some of the limits of technology and how to counter some of the negative implications of technology and its effect on relationships and creation of new addictions 6. develop effective technology ministry strategies for developing sustainable initiatives by monitoring and understanding the latest theories, trends, tools and opportunities in technology in ministry | 80% of students shall receive a pass rate score of 70% for each assessment using the MTM Rubric in the following assessments:  1. Appropriate technology final project  2. Theology of Technology final project  3. Theology of Work final project  4. Organizational systems final project  5. Tech Addictions final project  6. Emerging Media Ministry final project  7. Capstone Project  Job placement rate of graduates. |  |  |

**Table 4. Science, Technology and Ministry Master’s Program Five Column Model** **Table 5. Mapping CLOs and PLOs for Science, Technology and Ministry Master’s Program**

### Attainability of Mission, Goals and Objectives

We recognize that assessment is an ongoing process of improvement. Our assessment process is being led by our President with the full support of the organization. Because of this support, it will be much more likely to succeed.

We believe that this plan has shown these goals and objectives fit within our mission are appropriate to our stage in organizational development. The parent organization of City Vision, TechMission, has made the growth of City Vision its top priority. TechMission has strategically deprioritized previous efforts of our organization including ending our AmeriCorps program, and has integrated other efforts of the organization into the strategy of City Vision. Our President is completing his Doctorate in Organizational Transformation with a focus on higher education in an effort to expand our leadership capacity to implement these initiatives.

In addition, we have allocated the resources and hired staff to achieve these goals and objectives. Our organization has been conducting assessment and strategic planning for over 10 years. In addition to our history of meeting goals in City Vision, TechMission has managed many multi-million dollar government grants through AmeriCorps, the US Department of Health and Human Services, US Department of Justice and US Department of Education that follow a similar outcomes assessment model to higher education. We has had a history of meeting more than 80% of our goals and objectives both in our strategic plan, assessment plans and in other programs with major government grants. We believe that this history demonstrates our ability to accurately assess our capabilities and meet our goals and objectives. We will continue to update this assessment plan and our strategic plan each year, and expect that it will be instrumental to the improvement of our organization.

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