Improving Student Learning in Third World Communities through the Applications of Transformational Leadership and Technology

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TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO
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ABSTRACT

Students in third world communities often face many economic and educational challenges. The main setback that many kids face today is continued education. Overall, the purpose of this research is how transformational leadership and technology contribute to student learning in third world communities. A few key theories were used in this research, which include Transformational Leadership, Early Childhood, Social Penetration, and Media Richness Theories. From a research method standpoint, meta-analysis was used to determine how these theories relate to themes from various case studies done on improving student learning. The overall finding is that technology in tandem with transformational leadership does improve student learning. To further this study, it is important to determine that the research is repeatable and reproducible to other areas around the world in driving education growth for students to ensure that the processes and studies conducted truly influence improving a students’ education.
# TABLE OF CONTENTS

## CHAPTER 1: INTRODUCTION
- Importance of the Study ........................................ 4
- Statement of Purpose ........................................... 5
- Definition of Terms Used ....................................... 6
- Organization of Remaining Chapters ......................... 7

## CHAPTER 2: REVIEW OF LITERATURE
- Theoretical Basis .................................................. 8
- Philosophical and Ethical Assumptions ......................... 20
- The Literature .................................................... 10-20
- Research Questions ............................................. 21

## CHAPTER 3: SCOPE AND METHODOLOGY
- Scope of the Study ............................................... 23
- Methodology ...................................................... 24
- Ethical Considerations .......................................... 32

## CHAPTER 4: THE STUDY
- Introduction ....................................................... 34
- Data Analysis ..................................................... 35
- Results of the Study ............................................. 40
- Discussion ......................................................... 43

## CHAPTER 5: SUMMARIES AND CONCLUSIONS
- Limitations of the Study ....................................... 46
- Recommendations for Further Study ......................... 47
- Conclusions ....................................................... 48

## REFERENCES .................................................. 50

## APPENDIX ..................................................... 54
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

Improving Student Learning in Third World Communities through the Applications of Transformational Leadership and Technology

Chapter 1: Introduction

Importance of the Study

Students aged 7-18 in third world communities often face many economic and educational challenges. The main setback and problem area that many kids face today is continued education. A practical example is Su-Chou, a 17-year-old orphan who has grown up in the rural areas of Chongquing, China all his life, who wakes up every morning an hour before his classmates. While most of his peers are worried about high school and passing their exams, Su-Chou is worried about bringing home enough money for the family to eat. As a result, he is forced to work for his family in order to provide a living for everyone. The consequence is that he must forego his education in order to provide a living for his family. The future outlook trend that we see today is that a lack of education in the early stages of a student’s life can lead to more challenges later in their future. It is therefore important to address this gap today to help improve the overall value of students’ education as well as a better future outlook in their lives.

On a personal level, I travel to China each year with my volunteer group to care for the orphan students like Su Chou in Chongquing. Our mission is to teach them English, show them how technology can improve their education through online learning, and spend quality time with them to give them advice on education and career development. The long term vision goal of these annual trips is to develop a sustainable program that provides continual education opportunities for these orphan students that leads to increased hope in life, increased graduation rates, and increased rates of college entry.
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

But to understand the value of education, it is first important to take a look at the trends seen around the world. Specifically in third world countries, or “poorer countries that have struggled to attain steady economic development,” education is important but not always affordable (Aitken, 2012, p. 1). Third-world countries represent continents including Africa, Latin America, and Asia. Altogether, third world countries represent nearly 50% of the world’s countries.

Specifically for China, the World Bank believes that “Chinese support for the purchase of Information and Communication Technology (ICT) infrastructures for schools will most likely increase greatly in the coming years” (Trucano, 2011, para. 3). The World Bank also believes that “every ministry of education official” has connection to Chinese officials and partners, and their visions to drive education through the “use of computers in schools” are expected to increase in the near term (Trucano, 2011, para. 3).

Statement of Purpose

Overall, the findings from this study are used to inform the purpose of this research on driving student learning. That is, the purpose of this research is how transformational leadership and technology contribute to student learning in third world communities. We see that technology has the power and ability to bridge communication gaps and open up other opportunity for learning that was not possible in the past. Through technology as a medium, we also see that adding the element of transformational leadership gives the added component of creating sustainable learning for students by helping students to not only learn and grow but to also have the mindset of helping them become leaders of their own when they grow up. These sources provide several perspectives on important education initiatives today and in the future, ways to demonstrate transformational leadership to students, and how technology can contribute
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

to driving education opportunities. The research also provides the necessary resources to help set the platform needed to demonstrate evidence that technology can contribute to learning in third world communities.

Definition of Terms Used

*Third world* - Throughout this research, it is important to also clarify some important key terms. The research subject of this work is catered to students in third world communities. Third world, when used in this research, refers to the underdeveloped countries of “Asia, Africa, Oceania, and Latin America” (Chaliand, 2012, p. 1). Some of the common characteristics of third world communities include “poverty, high birthrates, and economic dependence on the advanced countries” (Chaliand, 2012, p. 1). Though this research pilots and focuses on improving education opportunities for students in China, the theories and methodologies used will be implemented to other countries at a future date to demonstrate that this research is both repeatable and reproducible.

*Repeatability* – Repeatability is defined as the project lead that can replicate one process again in another location and achieve the same results.

*Reproducibility* – Reproducibility is defined as allowing other organizations to replicate the methodologies and processes put in place and coming back with the same results. The goal through this research is to develop a strategy and process that drives sustainable education growth for students in third world communities that is both repeatable and reproducible.

*Volunteer* - Another key term used throughout this research is the term volunteer. Volunteer in general is defined as “somebody who works without being paid” or “a person who voluntarily undertakes or expresses a willingness to undertake a service” (“Merriam-Webster”, 2012). Relating this term to this research, volunteers in this case can include international individuals.
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

who travel out to China to help provide education opportunities to the students in the third world communities, and it can also include local volunteers who work without pay to help teach some form of education curriculum to the students. Throughout this research, these terms were used on multiple occasions, and the context of these terms relied back to these definitions.

Organization of Remaining Chapters

Relating this back to the study, it is for situations similar to Su-Chou that this study aimed to see how the principles of transformational leadership and technology helped contribute to students’ continued learning. This study was broken into four other important sections. The second section was focused on the literature review and the four theories used to study the research question. This section also focused on the literature analysis that complements each of the four theories used as well as a philosophical and ethical assumptions section. Summarizing the research question in relation to the literature review closed chapter two. The third section of the research was focused on the scope and methodology of the study. Specifically, this section used the principles of meta-analysis to analyze case studies in relation to the theoretical framework outlined in the literature review. The fourth section was focused on the study with an introduction into the study, data analysis around the case studies used, identifying the results of the study, and summarizing the section with a discussion on the findings. The final component of this study concluded with the summaries of the study. This final section also included the limitations of the study found throughout the research process, recommendations given for further study, and the overall conclusions and future outlook of driving student learning in third world communities through technology and the theories studied in this research.
Chapter 2: Review of Literature

Theoretical Basis

Addressing education gaps is important to any third world community. To do so, communication theories were applied to show how technology and teaching could be bridged to improve student learning. The area of communication theory was centered on interpersonal and intercultural communication, as teachers will need to be able to communicate and show how technology actually helps students learn. Intercultural communication bridges the gap between countries and how each culture is taught to learn, and it helps provide students an understanding of the culture of technology.

A few key theories used for this research include the Transformational Leadership Theory, Educational Theory, Social Penetration Theory, and the Media Richness Theory. The Transformational Leadership Theory is the theory about leadership that “creates positive change in the followers whereby they take care of each other’s interests and act in the interests of the group as a whole” (Burns, 1978, para. 2). This theory is important because transformational leadership is an enabler for student learning to be possible. The Educational Theory is the idea that educational thought is something that guides, explains, or describes some form of practice (“Educational Theory,” 1964). The stance that this research will take is that technology does contribute to student learning provided that leadership principles are inherent and practiced by the volunteers. Social penetration is the process of developing deeper intimacy with another person through mutual self-disclosure and other forms of vulnerability (Altman & Taylor, 2009, para. 1). This theory is important in that developing an understanding between the teacher and student is what paves way for learning to happen. Many of the orphans in areas around Chongquing, China aged 7-18 have lost loved ones, so volunteers from the United States may
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

need to take a step back to understand the reasons that hold students back from maximizing their learning potential. Additionally, the Media Richness Theory states that computer mediated communication (CMC) is too narrow and is used for transacting everyday business as opposed to providing a rich mix of verbal and nonverbal cue systems (Daft & Lengel, 1984, para. 1). This theory will be important, as there is ongoing debate if technology enhances or diminishes education value, and the research and analysis that will be done on this theory will shrink the notion of the digital divide that exists today. The digital divide, itself, refers to the ongoing debate/dilemma if technology contributes or hinders to human society as a whole.

Transformational Leadership Theory

A transformational leader “starts with insight into the motivation of a follower, but builds on it to raise the motivation, to expand the consciousness of the follower, so that the follower becomes the leader” (Carey, 2010, p. 1). They must know their audience in terms of what motivates them and help them take that motivation and build on it in a way that allows others to lead. Transformational Leadership Theory itself is the theory about leadership that “creates positive change in the followers whereby they take care of each other’s interests and act in the interests of the group as a whole” (Burns, 1978, para. 2). Transformational leadership is an important principle to touch on with relation to education because in today’s world, “the accelerated rate of change is creating unprecedented challenges for today’s leaders” (Rosenburg, 2010, p. 1). The result of these changes and challenges is that it further widens the gap between thriving communities in the world vs. third world communities. Education becomes a lower priority for leaders in third world communities, and it puts students in these communities at a disadvantage for learning. But transformational leadership is mindful of change at all levels, which can include individuals to various organizations and communities around the world.
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

Transformational leadership demands “integrity and coherence amongst beliefs, thoughts, feelings, and actions” (Rosenburg, 2010, pp. 15-16). This is important in contributing to student learning because transformational leadership is what actually propels student learning to take place. Transformation generates deep change. This is the kind of learning that is needed for students so that they are successful in life. Specifically, education models, technology, and other resources are great tools to drive education. But they are just tools. It is the people who can make these tools into education and learning opportunities for students.

**Literature**

From a literature perspective, we learn that there are two types of audiences when it comes to the Transformational Leadership Theory: the leader and the follower. Though at a high level, it may appear that the relationship is simple in the sense that a leader leads while a follower follows. The worst thing that can happen in society from a leadership perspective is when a leader’s voice is not heard, thus putting both the follower and the leader at a disadvantage, a perspective offered by Burns. Another complexity is that people play different roles in different contexts. All of this culminates into a dilemma known as the “Burns Paradox – a designation that would be modest but for its being not a solution or formula but a problem. If leadership and followership are so intertwined and fluid, how do we distinguish conceptually between leaders and followers?” (Burns, 2006, p. 171) Hollander (2010) believed in the importance of focusing on the follower first and not the leader. A follower’s perceptions and expectations is what set the tone for the kind of impact leaders can have on followers. Hollander further argued that followers can actually make significant contributions to successful leadership and in turn, leaders are called to be responsive to followers. The resolution then to this paradox lies in the “distinction between persons with unrealized wants, unexpressed attitudes, and
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

underlying predispositions, on the one hand, and on the other, persons with strong motivations to initiate an action relevant to those with such wants” (Hollander, 2010). From a practical standpoint on findings to this paradox, additional research is provided later in the methodologies section.

Leadership is important in driving student learning because student learning begins with us. Leadership is about “creating a way for people to contribute making something extraordinary happen” (Kouzes & Posner, 2007, p. 1). Some believe that the road to leadership requires sacrifice, and the path is narrow for one to take on. McAlindon (2007) believed that leadership is not about following where a path may lead. It is about going where “there is no path and leaving a trail” (McAlindon, 2007, p. 1).

Transformational leaders define public values that “embrace the supreme and enduring principles of a people” (Burns, 2003, p. 29). What makes transformational leaders unique is that they are the inspiration for people who seek to shape change. Simply put, “transforming values lie at the heart of transformational leadership, determining whether leadership indeed can be transforming” (Burns, 2003, p. 29).

Communication also plays an important role to a transformational leader. Leaders have to be mindful and understand if the potential follower hears the voice of the leader. Burns stated that the complication that communication plays in transformational leadership is that “people play different roles in different contexts” (Burns, 2003, p. 171). The best way to overcome this challenge is to build and open up the communication channel between a leader and a follower. It involves asking questions to one another to create a reciprocal communication channel where interpersonal communication is improved and where both individuals are learning more about each other. Burns also believed that “the resolution of the paradox lies in the distinction between
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

persons with unrealized wants, unexpressed attitude, and underlying predispositions” (Burns, 2003, p. 172). It involves leaders “with a strong motivation” to initiate action “relevant to those with such wants” (Burns, 2003, p. 172). A transformational leader, from the perspective of communication, must “address their creative insights to potential followers, seize their attention, and spark further interaction” (Burns, 2003, p. 172). Communication must be decisive as it breaks up the static situation and opens up the door towards building an effective relationship with one another.

Once the leadership principles are in place, one of the best mediums for driving student learning through effective demonstration of transformational leadership is technology. What makes technology unique is that it is “ubiquitous, touching almost every part of our lives, our communities, and our homes” (Staff, 2008, p.1). The major learning vehicles students learn today include textbooks and computers, and the trend technology is headed in the future with respect to education include tablets and cloud learning. Technology is not just about teaching computer and software program skills, but it is about “deepening and enhancing the learning process” (Staff, 2008, p.1). More importantly, technology supports four important components of learning: “active engagement, participation in groups, frequent interaction and feedback, and connection to real-world examples” (Staff, 2008, p.1). It puts a practical application to learning for students. Additionally, today, students represent 25% of the world’s population (Salcito, 2012, p. 1). As it stands, the student population is growing faster than the number of teachers in this world. So for global student learning reach to be possible, technology opens up the door for all of the forms of learning mentioned above. Online learning is a prime example where students can learn remotely. This learning method helps reduce cost, scale-learning opportunities across the globe, and opens up the world to new and more exciting ways to learn.
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

As seen above, there is a direct relationship between transformational leadership to technology. The main thing to note is that transformational leadership must occur first for technology to be realized in the right way. Transformational leadership is the enabler for student learning to be possible. Leaders are the individuals who change the world (Quinn, 2004, p.3). Technology is the medium that leaders use to put their vision into a practical and creative sense for students to learn.

When both transformational leadership and technology are used together, it can drive some amazing results for education. For example, for the children in developing countries, an initiative was started to build a $100 laptop for these kids. Led by One Laptop per Child Association (OLPCA), these organizations found a way to cut the screen’s manufacturing cost to $40.00 while reducing its power by more than 80 percent (Markoff, 2006, p. 1). This project helped to enhance the “One Laptop Per Child” vision. What this project also did for students is it opened up access to a whole new world for learning. Since students were limited in resources on obtaining books in third world communities, using technology opened up a gateway into the Internet that expanded the accessibility into online curriculums and virtual learning. This project also swayed the digital divide debate towards favoring the use of technology to improve education and shrinking the overall perceived notion of this divide. Digital literacy is so important because this initiative means, “giving parents and students the tools and know-how to use technology for education and job-skills training” (Richtel, 2012, para. 10). The main point of this initiative is that these low cost laptops changed the economic equation for developing countries, and it grabbed the whole world’s attention on what each country could now do to help kids learn at an affordable cost.
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

Transformational leaders enable one to not only drive education opportunities for others, but he/she has a mentality of helping others become great. Their vision and creativity is heightened, and their goal is not for them to receive glory for their efforts but for the sole purpose of seeing others succeed. Having this goal propels this creative mindset for the “One Laptop Per Child” vision, and through the help of technology as a medium, this dual combination enables every child to learn around the world regardless of social status or geography.

Additionally, for an initiative to drive student learning to be successful, important stakeholders will need to be identified to drive change and growth including leaders of a region or area within a third world community. These key business decision makers are individuals who pass laws and plans that others can follow (Kincaid, 2002, p.1). It is also important to partner with IT Directors and CIOs to create a plan that would implement an IT solution that not only opens up the door for learning through IT, but also demonstrate to these leaders the long term vision of investing for the future through students and reducing their cost to the economy on textbooks, while maximizing their investments on technology. IT Directors are the individuals responsible for overseeing the overall IT infrastructure of each school system to ensure that all invested technologies are running at full capacity. CIOs, or Chief Information Officers, oversee the overall vision of where schools will take IT to drive student education for the future. Finally, a project champion or coordinator is needed to oversee the whole initiative to increase the scope of the cross-group collaboration among various other organizations and individuals (Kincaid, 2002, p.1).

In China, since 1999, the Ministry of Education (MOE) has approved “68 common colleges and universities and the Open University of China to carry out experimental work of
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

distant education” (Haijun, 2012, para. 1). The result of this effort today has seen the increase of online degree graduates that have benefited tens of millions of people. These degrees “have built up teaching, management and service mode of distant further education and systems of policy and supervision, which became important examples of diversified, lifelong, online and open further education” (Haijun, 2012, para. 1).

The Educational Theory – Specifically on the Early Childhood Theory

The next theory evaluated in this study is the educational theory. Although there is no overarching theory on learning, there are various types of learning theories that share common themes that help with teaching practices. These can include, but not limited to, Constructivism, Behaviorism, Brain-based Learning, Control Theory of Motivation, Observational Learning, Social Cognition Learning, and the Early Childhood Theory. Of this subset pool of theories, the one that was focused on is the Early Childhood Theory. The idea behind this theory is “what happens in a lower grade always has some impact on the grades above it” (Askew, 2012, p.1). This theory stresses how children learn. The basic issues in this theory are to identify variables that are the most important factors in a child’s development. There are a few general types of concepts and approaches to early child development. They include the idea of maturation in that “development is the same in children as in other animals. It is based on biological imperatives that occur automatically (that is, naturally) in children with little input from parents and others” (Johnson, 2012, p. 1). Another concept is the idea of the environmentalist, or children that learn by “being given the proper stimuli and reinforcements” (Johnson, 2012, p. 1). Finally, a third and important concept to the Early Childhood Theory is the idea of the constructivist, which is based on a child-centered idea where kids create their own interests and make independent decisions (Johnson, 2012, p. 1).
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

Literature

Further exploring these three components of the Early Childhood Theory, the concept of “maturationism” is the idea of practicing patience and allowing time to aid with the development of a child’s learning (Johnson, 2012, p. 1). These are built-in “biological imperatives” that kids all learn, and what separates each student on their development is simply time (Johnson, 2012, p. 1). Environmentalism takes learning a step further through the idea of repetition. When a child answers a question correctly, that student receives some form of reward. This reinforces the learning process and cycle (Johnson, 2012, p. 1). Finally with constructivism, this idea holds that kids should be “involved centrally in their learning process. Teachers should be facilitators, while the child should be encouraged to move from place to place, interest to interest” (Johnson, 2012, p.1). The main component to this idea of learning is creative participation. The more students actively participate, the more they not only learn but also retain that information. Additionally, the significance of constructivism is that this idea holds that a solid relationship between teachers and kids are important. Empowering students is what propels the learning process to happen.

The Early Childhood Theory also touches on the use of technology to drive student learning. The idea with relating the Early Childhood Theory to technology is to first understand how technology will foster learning. The most beneficial plan is one that identifies how teachers can integrate technology into the classroom environment. Basic collaboration tools like email and the Internet allow for communication and exploration to be possible. The Adaptation Stage is when technology becomes thoroughly integrated into teaching patterns. Teachers integrate technology into their lesson plans, and technology is viewed more as a necessity in this stage. The final stage is known as the Transformation Stage, which is the idea, that technology
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

“changes and expands the learning environment” (“Stages to Technology Integration,” 2012). Project-based learning becomes common now, and students learn not only from teachers but also through self-directed curriculums on the computer.

The Social Penetration Theory

Altman and Taylor developed the Social Penetration Theory in 1973. The premise behind the Social Penetration theory is that “as relationships develop, communication moves from relatively shallow, non-intimate levels to deeper, more personal ones” (The Social Penetration Theory, 1973, p. 1).

Theorists have often interpreted the Social Penetration Theory from various standpoints, but the one that dominates the most is that as we spend more time with others, we are likely to disclose and share more. What makes this theory unique is that predictions can be made about relationship development based on how much self-disclosure is exercised. This then presents a “cost-reward model,” where the theory argues, “for a relationship to develop, both parties must self-disclose” (Altman & Taylor, 1973, p. 1). This theory is also often compared to a multilayered onion, with the goal of peeling through each layer to increase the level of depth and intimacy of the relationship. As individuals get to know each other, the layers “shed away” to reveal the core of the person (Altman & Taylor, 1973, p. 1). These conversations reveal both breadth and depth of individuals’ lives. Breadth covers the wide range of topics that are covered, and depth is the amount of information available in each discussion. The goal through this theory is to explain relationships with others from shallow to more personal and intimate levels of discussion.
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO
STUDENT LEARNING

Literature

In China, the Social Penetration Theory was demonstrated, but not explicitly used, through the “One Village One College Student” Project (Haijun, 2012, para. 2). This project was carried out by the Open University in China, and the idea behind this project is that teachers were trained at the technical and leadership level, so that the trainings could be used to spread higher education to rural areas through modern distant education (Haijun, 2012, para. 2). The trainings conducted helped to put a focus on teachers to not only understand the environment and the lifestyles students lived in these rural areas, but it also focused on interpersonal skills and developing a plan that would help each student graduate. The overall result of this project led to 37 provinces that participated as well as 582 teaching centers. More than 276,000 people were enrolled and 93,000 of those students graduated (Haijun, 2012, para. 2). Again, this would not have been possible without the trainings conducted to help each teacher improve their relational skills with their students, an important attribute to the Social Penetration Theory.

Another yet demonstration, but without explicit use, of the Social Penetration Theory was a project done in China called the “Education Services Society” (Haijun, 2012, para. 3). This project has built over 1,982 teaching centers that spans over 495 counties, and these training centers have trained 650,000 people in poor areas including “teachers, officers, farmers” that provided more than 2000 hours of free training courses that included both in person and distant learning (Haijun, 2012, para. 3). What makes this project unique to the application of the Social Penetration Theory is that it led to increased reciprocal self-disclosure between teachers and students. This project opened up the doors for in person training, which increased interpersonal communication between individuals that attended. These training programs also helped train
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

teachers to develop stronger interpersonal skills to effectively build strong relationships with their students and create an environment of open reciprocal communication.

The Media Richness Theory

Next is the Media Richness Theory. The idea behind the Media Richness Theory is that communication media have varying capacities for resolving ambiguity, negotiating varying interpretations, and facilitating understanding (Daft & Lengel, 1984, p. 1). It is used to rank and understand various communication mediums and its ability to reproduce the information that is sent over and exchanged. Specifically, this theory enables individuals in organizations to process and exchange information. It helps clear up communication roadblocks by personalizing communication in terms of using the appropriate channels that produce the most effective forms of communication between individuals. A few examples of communication mediums include face-to-face, video conferencing, telephone, 2-way radio, and written documents (i.e. letters and emails) (Daft & Lengel, 1984, p.1). These examples are also ordered from the most effective to the least effective modes of communication. By understanding how the Media Richness Theory works, transformational leaders can use this theory in tandem with the Social Penetration Theory to broaden the scope of the communication channel between teachers and students or leaders and followers and build relationships that lead to learning and growth.

Literature

The Ministry of Education in China carried out a project in 2002 called the “Campus Interconnectivity” project in elementary and secondary schools all over China “to make nearly 90% of independently established elementary and secondary schools access to Internet in 5 to 10 years” (Haijun, 2012, para. 4). This was the best way to scale this project across thousands of students needing education, and through the Media Richness Theory, students could learn from
recorded and live webcasts. Even though the communication channel was not as rich as face-to-face, many of the recordings included professors teaching through webcams, enabling students to understand visually the thought process behind the principles taught in each course. The application of the Media Richness Theory in this project also enabled students to easily process and exchange information through online discussion boards. Because the webcasts were prerecorded, students could always rewind to areas in the lecture they were confused about and learn the principles at their own pace. If they had inquiries, they could pose their questions on discussion boards for other students to comment and provide their feedback. This medium created a culture of online learning among students as well. As a result, this increased the application of the Social Penetration Theory (SPT) where students were building relationships with other students through these discussion forums. Another application of SPT where the communication channel between teachers and students was further bridged was the use of email. Students could now email their teachers to ask questions or submit their assignments. This overall initiative led to increased computer-assisted instruction programs, increased media richness through online virtual training opportunities, and improved overall student performances on tests. Again, though the communication stream is not as rich as providing more in classroom curriculum resources for students to learn, providing students the gateway to learning enabled The Ministry of Education to scale learning opportunities across multiple regions, including the rural parts of China.

**Philosophical Assumptions**

This study assumes that student learning can be enhanced in multiple ways. There are core principles that improve student learning not just for the short term, but also for the long term. An additional component of this study is to gain a deeper understanding of how upbringing
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO
STUDENT LEARNING

permeates to their learning capacity outside of the use of technology or the theories noted. This
more critical understanding of how students are brought up in third world communities assists in
shaping the right programs for the students to learn. Some of these examples that can affect how
students learn based on their upbringing include, if they had parents who raised them while they
were young. The number of orphans (students who have lost one or both parents) in third world
communities tends to be higher than developed areas. The result of this could lead to more
students who are introverted and shyer to learn. There could also be students who could not
afford education consistently and do not receive the same level of education as others. Still,
many others could be part of a family that embraces China’s One Child Policy that adds
additional pressure for students to learn. They represent the face of the family (One Laptop per
Child Association, 2012, p. 1). So failure to do well in one’s studies could lead them to believe
that they are a disgrace to the family. There are many implications that drive student learning.
Ultimately, this study, through the four theories adopted, is used to demonstrate a way that
learning is possible for anyone, regardless of their background.

**Research Question(s)**

The research supports the idea that technology used in tandem with the theories
implemented in this study can be used to provide ways of driving student learning. Students
living in third world communities are often stereotyped as laggards, ones who often fall behind
in their curriculum and have the lowest graduation rates in the country. Lack of government
funding and media portrayal is common issues that affect how these students are perceived. The
result is a lack of investment in these students from other organizations, as these institutions lack
the insight into their return on investment. Relating the four theories mentioned above back to
the research question, this study focuses on how transformational leadership and theories of
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

learning and communication technologies contribute to student learning. Through the theoretical and meta-analysis of various programs done in China to drive education, study advances the following research question: How does the application of transformational leadership and technology improve student learning in third world communities?
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

Chapter Three: Scope and Methodology

Scope of the Study

The scope of the study is focused on understanding how to improve learning for students, how to equip teachers with the right resources to help students grow, the theoretical frameworks that were used, what geographies the trends and conclusions were applied to, and the various forms of data analysis conducted.

This study does not include data analysis for countries that are not categorized as a third world community. This also does not include adults pursuing education, individuals pursuing post-undergraduate work, and theoretical analyses conducted outside of the four theories mentioned in the literature review. Data were not obtained from personal real world experiences, though personal experiences did inform the study.

From a geographical standpoint, third world communities, and specifically China, are included in this study. From a data analysis standpoint, data were obtained from case studies conducted in previous research that related to the Transformational Theory, Educational Theory, Social Penetration Theory, and the Media Richness Theory.

Additionally, this initiative to drive student learning through technology and leadership principles is targeted specifically at K-12 and higher education students who live in countries with a low living standard, undeveloped industrial base, and low Human Development Index (HDI) relative to other countries (Aitken, 2012, p. 5). From the perspective of students, what is important for them is that they seek ways to learn, ways to enjoy life, and to have a sense of community and empowerment. With the lifestyles that many students face in third world communities, there are external factors that hinder them from satisfying their needs. This can
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

include, but not limited to, not being able to afford tuition costs, having limited to no opportunities to even learn, or being forced to enter into the workforce at a very young age.

The breadth of the work was fairly moderate in the sense that it has both broad and narrow perspectives. It will be broad in the sense that analyses conducted will apply to research projects conducted about all third world communities, but it will also be narrow in the sense that trends or conclusions drawn on driving student learning through technology will be focused on studies conducted in rural areas in China.

Methodology

For this study to work and using the principles of communication and technology, this research focused on a methodology of what this vision would look like from a practical sense. The methodology adopted to implement this initiative is the evaluation research. Evaluation itself is the “systematic acquisition and assessment of information to provide useful feedback about some object” (Trochim, 2006, p.1).

From a research method standpoint, meta-analysis will be used to determine trends and themes from existing published literature (Rubin, 2010, p. 214). The idea behind meta-analysis is that it combines statistical results found from “scholarly journals and chapters” and combines it with the idea of determining how much of an effect a “particular variable had over time” (Rubin, 2010, p. 214). This research study took an interpretive approach as opposed to an objective approach as there were “multiple meanings or truths [that] are possible” given the focus area of study (Griffin, 2009, p. 15). Additionally, the factor that adds to a significant benefit for conducting meta-analyses is the availability of electronic databases that contain the results of published studies. There are also two types of meta-analyses that can be conducted. The first is the idea of looking for trends or themes from published material. The other type of meta-analyses
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

is when conclusions are drawn about the “strength or consistency of communication effects across studies” (Rubin, 2010, p. 214). Both types of meta-analysis were demonstrated in this study.

Additionally, meta-analysis falls under the message or artifact oriented research. The message or artifact-oriented research “focuses on examining and interpreting messages and related ideas, such as people’s underlying values. There are two principal types of message- or artifact-oriented research methods: archival/documentary and textual” (Rubin, 2010, p. 212). The principal type evaluated is the archival/documentary research. The idea behind this research centers on “finding, examining, and interpreting messages that were communicated in the past” (Rubin, 2010, p. 212). For this study, meta-analysis falls under the archival-documentary research and will include qualitative measurements. Qualitative research will revolve around observations of education learning in the classrooms from both teachers and students. It will also include secondary meta-analyses conducted from communication theories and past research findings to draw trends on student learning through the use of technology.

**Framework of the Methodology**

The framework of this methodology will cross-reference various case studies done using technology to improve student learning and synthesize it based on the theories previously mentioned (i.e. the Transformational Leadership Theory, Educational Theory, Social Penetration Theory, and the Media Richness Theory). These existing case studies would include proven measurable data of how technology was used to quantify increased student learning. From this perspective, measurable data would be obtained from the case studies, and theory can be used then to draw conclusions for next steps regarding the rollout of this initiative in other third world communities. The overall goal of this design is to take existing processes in place today in third
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

world communities and improve upon it through observations and surveys. The evaluation strategy implemented in this case follows the “scientific-experimental models” where this strategy prioritizes “on the desirability of impartiality, accuracy, objectivity, and validity of the information generated” (Trochim, 2006, p.1). The design of the evaluation research included a hybrid of both qualitative and quantitative designs. The main measurement system that was used to determine success was improved student learning. This measurement system was cross-referenced to the various theoretical analyses to come up with a decision that improved student learning. Additionally, Kaoru Ishikawa developed a cause and effect type of diagram called the Fishbone Diagram that was used by Dr. W. Edwards Deming as one of the “Seven Basic Tools of Quality Management” (Ishikawa, 1985, p.1). The goal of this (Appendix 1.) diagram was to identify and prioritize the main factors/causes that drove the effect. So applying the Fishbone Diagram in this particular instance, to achieve increased student learning, the main factors/causes that will be implemented include analyses conducted around each theory, relating each theory back against personal experiences, and building a sustainable plan through theoretical practices by using various statistical and process improvement principles and methods. These are the primary factors in which success will be measured by to improve overall student learning in third world communities.

Additionally, the literature review and the visual schema of the model informed the specificity and focus of the evaluation research by first understanding the context of why it was important to pursue this initiative and the context surrounding its importance and purpose. Specifically, the literature review became the framework of the methodology and discussed how quantitative research demonstrated what hypothesis was being tested. The model also put a process in place that drove change, impact, and influence across a given region to drive process
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

improvement and sustainable growth for the goal of improving student learning. Both the literature review and the logic model also combined theory and practice together, which not only puts a plan in place, but it also provided the process needed to make the vision a reality.

Meta-Analysis – Transformational Leadership

Relating the principles of transformational leadership to meta-analysis, several programs and case studies have been conducted to improve how teachers lead and contribute to their students’ learning. The reason for this is because leaders across public and private sectors are recognizing the rise of China as “one of the central facts of the twenty-first century” (Steward, 2007, p. 1). The country leaders’ desire to show the world that China is economically growing and leading the world in innovation is contributing to the investments being made to train teachers. Chinese leaders believe that “teachers hold the key to making or breaking a program” (Steward, 2007, p. 1). With the shortage of actual teacher headcount spreading across China as a trend, it becomes even more important to invest heavily with the current teachers today to drive good, quality education for the students.

To start off, more and more teacher-education programs have been put in place in China. The National Council of Accreditation of Teacher Education (NCATE) accredits these programs. Another renowned program is known as the Teaching of English to Speakers of Other Languages (TESOL) (Steward, 2007, p. 1). These programs have been successful and have resulted in improving English-language learning and foreign language learning in K-12 schools. These education programs have also emphasized the importance of certifying teachers. By doing so, this helps to increase the core competencies of each teacher when it comes to their output and performance in driving education opportunities for their students. These core competencies can include a passion for quality, effectively collaborating with various groups to drive innovative
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

ways on improving student learning, and impacting and influencing students in a way that enables them to be successful in their academics, and helping them to develop their transferable skillsets. Some of the examples of certifying teachers in China include academic skills assessments, which tests candidates for their competence in math as well as their reading and writing skills (Steward, 2007, p. 1). There is also a subject assessment that focuses on more specific course-related curriculum such as computer science, biology, physics, etc.

From a professional development standpoint, more efforts around this initiative are being put in place, and it includes information on “materials and resources; student recruitment and program sustainability; instructional strategies and assessment; balancing interpersonal, interpretive, and presentational communication; incorporating culture into language instructions; and mapping curriculum across grades and content areas” (Steward, 2007, p. 1). These factors are all important in building the right principles of leadership within each teacher to ensure that the output of education that students receive is one that exemplifies quality and growth.

Relating the principles back to the study, transformational leadership is an important asset teachers must possess for student learning to be possible. But for transformational leadership to be possible, there must be investment from government leaders to put the right resources for teachers to have an opportunity to learn. This can include creating a certification program for teachers and developing teacher education programs to provide continual training and development.

Meta-Analysis – Early Childhood Theory

A case study was done in 2011 from the United Nations Children’s Fund (UNICEF) that explores UNICEF China’s “Child-Friendly Schools (CFS) project, which was initiated to “expand inclusive education for children from disadvantaged groups; provide safe and protective
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

learning environments; improve the capacity of all stakeholders in implementing a rights-based approach to quality education; improve professional teacher competencies; strengthen school-family community partnerships; and foster children’s participation and well-rounded development” (Nanzhao, 2011, p. 1). The purpose of this case study is to show how the CFS project impacted student education. CFS existed to provide inclusive enrollment and equal treatment for all school-aged children. Teachers were trained to integrate “child-centered concept into classroom teaching in the pilot regions” (Nanzhao, 2011, p. 1). These pilot regions included 12 rural primary schools in Guangxi Zhuang, Inner Mongolia, and Chongquing. The training also focused on the importance of promoting care and respect for children, “improving pupil-teacher relationships,” and making schools and learning environments more child-focused (Nanzhao, 2011, p. 1). As this project evolved, learning was focused more on “participatory teacher-pupil interaction” (Nanzhao, 2011, p. 1).

This project showed the importance of promoting care for children. As the Early Childhood Theory implies, “what happens in a lower grade always has some impact on the grades above it” (Askew, 2012, p. 1). China’s leaders recognized the importance of investing in early child development, and the long-term results of this investment have been astounding. Based on an analysis study conducted by UNICEF, the CFS pilot schools in the rural parts of China not only increased their net enrollment 100% with no dropouts by either boys or girls, but “awareness for equal care and respect inculcated in both teachers and students” (Nanzhao, 2011, p. 1). This is a great demonstration of the applications of the Transformational Leadership Theory, Early Childhood Theory, and the Social Penetration Theory. The Child-Friendly Schools (CFS) project focused heavily on teacher training which helped each teacher learn principles inherent in a transformational leader. The project also emphasized the importance of early child
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

development and promoting care, equal treatment, inclusive enrollment, fostering active child participation, and respect for students at a young age. Finally, this project also emphasized the importance of improving pupil-teacher relationships, which is a demonstration of the Social Penetration Theory. Establishing rapport and a relationship built on trust helps drive student learning that enables students to learn with an uncapped potential.

This project also showcased some lessons learned from an implementation standpoint. It is important to apply concepts and best practices that reflect the culture of the region that the project is being rolled out to. Each region has different cultures and may not always provide the same output of success. Additionally, it is important to foster strong organizational leadership and “inter-project, central-local, and inter-departmental coordination” to create a more streamlined process that can be replicated across various geographies (Nanzhao, 2011, p. 1).

Meta-Analysis – The Social Penetration Theory

The United Nations conducted a case study on China as a whole in 2007. Of the key setbacks that were discovered in this study, transparency was a major challenge when implementing projects and teaching kids. Transparency International ranked China No. 70 in 2006 among 163 countries on the level of transparency among their people (Jing, 2007, p. 17). Furthermore, learning styles were still traditional in the sense that students received harsh punishment from their teachers if they did not behave. They used scare tactics to drive discipline as opposed to taking the time to understand each student’s needs and challenges and working with them to improve their growth areas. From a gender standpoint, females were looked more as administrators than as leaders of the schools (Jing, 2007, p. 17). In other words, females could grade papers and take part in being teacher assistants, but they could not lead the classroom as the primary teacher. In fact, in rural areas, less than 10% of head teachers are females (Jing,
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

2007, p. 17). So their lack of leadership and credibility would often hold them from trying harder to help improve student learning.

Through these negative trends came major changes that strived to improve the economy. The New National Curriculum was placed to improve teaching and learning quality. This new curriculum challenged the traditional education philosophies by changing the textbook covering the whole country to various versions to allow for flexibility in customizing curriculum. This new curriculum also “encouraged a participatory approach in the classroom” which increased both the student and teacher’s interpersonal skills.

Meta-Analysis – The Media Richness Theory

From a technology standpoint, the Central Government in China partnered with provincial governments in 2007, requiring all secondary schools “in rural western areas to set up computer labs and satellite receivers and all primary schools in these areas to be equipped with VCD/DVD players” (Jing, 2007, p. 13). This project led to a total of 10 billion RMB in investments, 50% of which came from the Central Government (Jing, 2007, p. 13). The idea behind this project is that through distance learning, remote schools would be able to receive the same high quality teaching and learning resources as urban schools (Jing, 2007, p. 13). The result of this project led to increase flexibility to various modes of learning, offering not only textbooks but online courseware as well. This, in turn, also led to increased test scores. This is important to the media richness theory as it helps to decrease the digital divide and show that technology can be used to scale learning across both rural and urban areas. It can also be used to save on cost as opposed to purchasing books for every student, and it allows communication to be streamlined so that China can continue to stay ahead of the game and adopt new educational policy changes more smoothly and efficiently.
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

Ethical Considerations

Ethical considerations are also important to take into account to ensure that safety is addressed, that all actions are compliant with the law, that risks are mitigated as much as possible, and that ethics is a standard that everyone can learn and live by. Ethics is a process that involves the evaluation of ordering our values with respect to a particular decision (Cooper, 2006, p. 41). This is the precedence that must be set to ensure that student-learning growth is done in the right way.

The risks and rewards are important to note for participants who take part in this technology program to drive student learning. For students, their risk is a whole new style of learning. Online virtual learning can be challenging in the sense that it requires self-discipline and a larger percentage of independent learning. Though they will have online curriculum to view lectures, they will also have to do some independent studies and pace themselves accordingly. But the benefits outweigh the risks, as students will also have the flexibility to attend live lectures as their schedule permits. The whole point of the technology initiative is to provide flexibility and offer students a different way of learning. Technology through the Internet also provides students a whole world of resources they can access online to do their work, and their level of creativity is expected to blossom with technology as the medium to their learning source. For teachers, their risk has to revamp their existing curriculum to incorporate technology into the mix. For teachers that are not well versed on technology, their learning curve could be quite high, and it is up to the teachers to ensure that learning is maximized for students. But again, the upside is tremendous for teachers. Technology’s purpose is not to replace live lectures and classroom learning. Its purpose is to complement a teacher’s curriculum, offering them multiple sources to teach their students (Aitken, 2012, p. 20).
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

There is potential for adverse effects that can include lack of discipline from students to follow through on their online course studies. For teachers, the adverse effect could be that teachers are not ramped up on technology themselves and either do not use it at all in their teachings or use it on the wrong capacity. For the school board, the adverse effect could be budget spending that does not reap the rewards of their investment with increased graduation rates. These are all potential effects that could happen, but this is also the reason why multiple measures are being put in place to ensure that growth is maximized as much as possible and that both quantifiable and qualitative results can be obtained to demonstrate success.
Chapter 4: The Study

Introduction

China has the largest education population in the world. In past decades, studies have shown that enrollment rates at the primary and junior middle school level have increased. Adult literacy rates have also increased, and “illiteracy rate among young and middle-age groups has decreased significantly” (Jing & Hu, 2007, p. 2). But where we see areas of growth improvement lie in the eastern and western parts of China with regards to their education development. So from a geographical standpoint, this is the primary area in China that this study will focus its study on. The Chinese government has also made strides to reach education equality. In 2004, the Chinese government “prioritized universal compulsory education in western areas and the elimination of illiteracy as the national education strategy, and initially set up a strategic plan for the first 20 years of the 21st century which covered all EFA aspects” (Jing & Hu, 2007, p. 2).

But in terms of disparity, the greatest barriers that face the people of China with regards to education today include “poverty, gender, social exclusion, people with disabilities and children with exceptionally difficult circumstances” (Jing & Hu, 2007, p. 2). But the Chinese government is determined to provide good quality schooling even in the hard-to-reach areas by raising teacher qualifications, providing more teachers in remote areas, and improving the level of education students receive from teachers. To begin, China has put education as “the highest priority among all the priorities” (Jing & Hu, 2007, p. 2). We will now look to see how the Chinese governments’ various strategies were implemented to drive student learning in the eastern and western parts of China. Specifically, the one that will be outlined is China’s Education for All (EFA) Program, by 2015.
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO  
STUDENT LEARNING

Data Analysis

At a high level, China has the world’s largest population with over 1.3 billion people that live in the country. If the country is broken out between rural vs. urban areas, 57% of the population lives in rural areas. Of that 57% that live in rural areas, 20% of that population is less than 14 years old (Jing & Hu, 2007, p. 4). Demographic studies also show that the Chinese government has identified about 55 different minority groups in the country.

Breaking this down further from a geographical and economic perspective, the gap between eastern and western China is widening as well as the urban and rural areas in those communities. An example includes a study conducted in 2006 on the GDPs between eastern and western China. In 2006, the GDP in Shanghai was $7,000 USD but was only $700 USD in Tibet (Jing & Hu, 2007, p. 4). Relating this to an education perspective, Beijing (eastern China) may spend as much as $10 million to build a public primary school while in western areas, this same amount can be used to build over 400 schools.

Additionally, children “go to school at 6 or 7 years old, which is the starting point of the nine-year compulsory education – which normally consists of 5 or 6 years of primary education and 3 to 4 years of junior/middle school education” (Jing & Hu, 2007, p. 4). These are the rules of the compulsory education system that was introduced in 1986, but kids may actually begin kindergarten much sooner, and they may also begin as early as 3 years old. Statistically, kids ages 3 to 6 that attend school represent 41% of the population (Jing & Hu, 2007, p. 4). After compulsory education, students can then begin high school for three years and then enter into their university education.

Country leaders in China want to show that their country is economically growing and leading the world in innovation. From a meta-analysis and transformational leadership
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

perspective, to provide the right level of education for students, growth and learning begins with the teachers. Programs such as the National Council of Accreditation of Teacher Education (NCATE) and the Teaching of English to Speakers of Other Languages (TESOL) were established to improve English-language learning and foreign language learning in K-12 schools. These education programs have also emphasized the importance of certifying teachers. The idea behind NCATE is “transforming teacher education through clinical practice: a national strategy to prepare effective teachers” (“NCATE,” 2012, p. 1). This program is a “voluntary peer review process that involves a comprehensive evaluation of the professional education unit” (NCATE, 2012, p. 1). This review itself is based on NCATE Unit Standards, which is a set of research-based standards developed by various education sectors in the teaching profession. The way that accreditation works is that it requires an on-site review of the country’s proposed program, and a review of the individual programs are conducted by a group of examiners, known as the Board of Examiners (BOE). Their job is to conduct on-site visits and determine the unit’s capacity to effectively deliver the program. This program also focuses on the professional education unit, which is defined as “the administrative body at a college or university that has primary responsibility for the preparation of school personnel” (NCATE, 2012, p. 1). This unit is expected to coordinate all professional education programs of school personnel. These initial teacher programs are done at the baccalaureate or post baccalaureate levels to prepare candidates for the first license to teach. They include “four-year baccalaureate, post-baccalaureate, and master’s programs leading to licensure” (NCATE, 2012, p. 1). Some other programs may also include 5-year programs and a yearlong internship.

Additionally, with the launch of the TESOL program in China, its goal is to “advance professional expertise in English language teaching and learning for speakers of other languages”
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

(TESOL, 2012, p. 1). The idea behind this program is to develop a professional community that has “professionalism in language education, interaction of research and practice for educational improvement, accessible, high quality instruction, respect for diversity, multilingualism and multiculturalism, respect for individual language rights, and collaboration” (TESOL, 2012, p. 1). There are three primary goals that this program aims to achieve. The first is to allow, “English language learnings [to] receive quality education through TESOL International Association’s leadership in the field” (TESOL, 2012, p. 1). The process for how this goal will be accomplished is to first increase TESOL’s capacity in producing resources for teachers to learn English to teach to their students. This includes offering both published curriculums and online courseware for teachers to learn. They also implement advanced research-based practices that improve educational outcomes of English language learners. The second goal that this program aims to achieve is for TESOL members “to build expertise and [be] recognized for their involvement and professionalism” (TESOL, 2012, p. 1). The way this process works is to increase member engagement and recognition through the association. They have also developed a communication forum online for members and entities to share best practices among each other, and they also bring a diverse group of individuals to the team to allow others to learn from others that have very different backgrounds. The third and final goal of this program is for “individuals and organizations to look to TESOL International Association to inform policy and practice” (TESOL, 2012, p. 1). Through the implementation of these processes and principles, the end goal is to better equip teachers in teaching English effectively to their students in China.

Shifting over to the Early Childhood Theory in relation to meta-analysis studies done with UNICEF and the Child-Friendly Schools project, we see an expansion of education opportunities for children from disadvantaged groups. The purpose of this case study was to
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

show how the CFS project impacted student education. CFS existed to provide inclusive enrollment and equal treatment for all school-aged children. These programs included 12 rural primary schools in Guangxi Zhuang, Inner Mongolia, and Chongquing.

From a personal standpoint, I have been working on an initiative to improve student learning for orphan students in rural areas for the past three years in Chongquing, China through my volunteer organization. Our project implements many of the principles emphasized in the Child-Friendly Schools project. The volunteers we bring to China each year come from church and volunteer groups in Seattle, Portland, Toronto, Hawaii, and New York. Each team prepares a component of the summer program that is held in Chongquing each year from English teaching curriculums to arts and crafts activities that emphasize the lessons taught. In the evenings, we spend them coaching them on their education and career development as well as to help them plan for their future. This program is open to all students in the rural areas the volunteer organization is assigned to but specifically caters to orphan students.

The background behind these students is that most of them have lost one or both of their parents at a very young age. As a result, they are forced to live with their grandparents to have some form of housing and shelter. But the grandparents cannot support themselves, so the typical trend is that these students will live with their grandparents and end up being the breadwinner of the household, often forcing them to stop their schooling in order to work. CFS aims to train and focus its effort on the importance of “promoting care and respect for children” (Nanzhao, 2011, p. 1). What we do to provide care and respect for the children is we give them another avenue for them to learn. We understand the importance of a child’s early development and the implications it holds for them as an adult, so we invest as much of our time as possible to equip them with the right resources for them to have opportunities to learn. Some of these examples
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

include, singing songs, grammar and public speaking courses to help them improve their English and articulating their thoughts clearly, arts and crafts to learn about other cultures, and 1-1 coaching from our volunteer group to help them plan for their future.

From a meta-analysis standpoint in relation to The Social Penetration Theory, Transparency International ranked China No. 70 in 2006 among 163 countries in terms of the transparency level between teachers and students. The reason why is because many teachers were often taught to use scare tactics to drive discipline to their students as opposed to adopting a relationship-building mindset. Gender also played an issue as less than 10% of head teachers were females, so a student’s ability to view their teacher with respect and credibility was different between males and females (Jing, 2007, p. 17). But a new program was put in place to address these issues. This program was known as the New National Curriculum, and its goal was to improve teaching and learning quality. Some of the major changes to the norm that were implemented in the New National Curriculum were to offer customization of curriculum in each classroom. The content of these curriculums also changed, encouraging more of a participatory approach.

Relating this back to the volunteer trip I take each year to China, building interpersonal relationships with students is one of the major challenges we face each year. Most students are shy and many are too timid to speak up in a classroom setting where others hear their opinions. If students do respond, they typically provide their answers in brevity. There is this sense of a lack of confidence in speaking up among the students, so what we did is we began to adopt many of the principles of the New National Curriculum. We encouraged participatory sharing among the kids in all of the lessons we taught. We also provided a combination of both group discussions and one-on-one discussions. We implemented a method known as pair sharing where we start off
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

each day by assigning each student to one other student. They have about half an hour to share with each other the curriculum that was taught the previous day and their level of understanding. There is also a time known as “singspiration” where kids are taught songs that relate back to the curriculum. Finally, we also rolled-out small group sessions where kids have an opportunity to be with other students and teachers in a smaller group setting, and the topic of discussion is more intimate in the sense that sharing about personal struggles, personal development, and having a futures discussion becomes the focal point of small group time.

Each year, in addition to the English teaching curriculums that my volunteer group and I implement, we also have a technology component of the trip where we spend time educating students on computer programs, including learning how to type, viewing classes online, learning how to create movies, and building a website. What we encourage through the rollout of this IT initiative is to show to students the flexibility that technology provides with respect to learning, and the wealth of information technology can provide to students.

Results of the Study

The result of integrating the four theories noted above in relation to various case studies done in China through meta-analysis has produced some amazing results. At a high level, the Chinese government conducted studies to understand student enrollment rates. The data collected discovered that the net enrollment rate of primary school students is 99.2%, and the gross enrollment rate of junior middle school students is 95% back in 2005 (Jing & Hu, 2007, p. 5). Data showed that literacy rates increased from 77.78% in 1990 to 90.92% in 2000, and the illiteracy rate decreased significantly among young and middle-age groups (Jin & Hu, 2007, p. 5). The overall figures and findings of this study point towards a positive trend.
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

But the Chinese government has high goals and aspirations to provide education opportunities for all. It is the case that 1 to 5% of the enrollment in the country is “the most difficult to reach and sometimes it takes years for people to realize the needs of disadvantaged groups since the very positive overall figures tend to obscure continuing problems” (Jing & Hu, 2007, p. 6).

With the launch of the NCATE program mentioned previously, the results have been outstanding. The areas in China that have participated in the NCATE program have resulted in 80% of the “unit’s program completers have passed the content examination required for state licensure by a state” (NCATE, 2012, p. 1). Additionally, several conditions are also met when an institution is formally accredited. This includes the fact that an “institution recognizes a professional education unit that has responsibility and authority for the preparation of teachers and other school professionals, and identifies a unit head such as a dean, director or chair” (NCATE, 2012, p. 1). The second condition that is met is that “written policies and procedures guide the operations of the unit and include published criteria for admission to and exit from all initial teacher preparation and advanced programs (NCATE, 2012, p. 1). The results also indicate a formal process of accountability where the unit commits to submitting program reports for each program that NCATE has approved at least once a year prior to the visit. Finally, the unit, as a result of formally being accredited is also formally recognized as having a shared vision to prepare “educators to work in P-12 schools and provides direction for programs, courses, teaching, candidate performance, scholarship, service, and unit accountability” (NCATE, 2012, p. 1).

Additionally, the launch of the TESOL program in China produced some great results in building up good, quality teachers that teach English effectively to their students. The results of
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

this program for all of the teachers that participated included “strengthened relationships with affiliates and other educational organizations to advance the profession” (TESOL, 2012, p. 1). This opens up the door for more opportunities for teachers to learn at an affordable cost. This program also allows China to have a formal “professional development program,” including the “Leadership Development Certificate Program, and the Principles and Practices of Online Teaching Certificate Program” (TESOL, 2012, p. 1).

From an Early-Childhood Theory perspective, the results of the Child-Friendly Schools (CFS) project in relation to my annual project of traveling out to China each year to teach orphan students English and helping them plan for their future has exceeded all expectations. A few measureable results we’ve seen include increased graduation rates from 5% to 25% in just two years and increased test scores in math, science, and reading. From a non-measureable standpoint, the results far outweigh the measureable ones. What we encourage is community building, and that these students do not have to live lonely lives. Even after they have concluded our month long program, we have seen students coming together in the evenings and on weekends to study and learn together. Older students have taken on leadership roles and have begun mentoring other students that are much younger than they are. We have also seen increased commitment from students that they not only see the value of education now but also follow through on their studies to provide a better future for themselves.

With relation to The Social Penetration Theory, we have seen improved results in transparency between students and also between students and teachers. Through the implementation of pair-share, small groups, and singspiration, the New National Curriculum concept of a participatory approach has been realized. Because students in China are typically shy in general, the way to break the ice and encourage participation is to put them first in their
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

comfort zone. They are more likely to share if they only speak to one individual at a time, and if the teachers lead the discussion, they are also more likely to follow the leaders. Once the kids are in their comfort zone, adopting different methods where kids do not even realize they are speaking in front of others helps improve their interpersonal and public speaking skills. These examples include sharing or sharing during small group time.

The results of the technology initiative rollout in China through the use of the Media-Richness Theory have included increased completion of coursework from students. Since many students work during the day, offering an online component to complete their courses in the evening has allowed students to work and complete their schoolwork. Technology has also led to increased learning for students through their fascination with this different style and type of learning. Having the opportunity to work with students online through discussion boards, forums, and email increases their social network and the opportunity to learn from others on their coursework.

Discussion

At a high level, through the implementation of these programs, despite the fact that the studies are showing positive trends, this study has its limits and accuracy issues. For one thing, the “education management information system (EMIS) in China has not been fully developed” (Jing & Hu, 2007, p. 6). The result is that it restricted the capacity of the Ministry of Education (MoE) in collecting the data of EFA in a comprehensive and reliable way (Jing & Hu, 2007, p. 6). Additionally, there are actually many schools that are located in remote areas where data becomes inaccessible. So from this perspective, the data reflects accurate counts for urban areas but most likely has inflated results for rural areas, and therefore contains inflated data for the overall study as well. Finally, there are also many unregistered migrants that are missing from
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

the overall data collection plan, so this can significantly impact the calculations for the enrollment rates of the student population.

For this plan to effectively work and truly achieve “Education for All,” the Chinese government’s plan to accomplish this goal is to encourage all students in China to complete the compulsory education program thoroughly. This will help to eliminate illiteracy among young and middle aged adults and improve the overall quality of the education program (Jing & Hu, 2007, p. 7). The Chinese government is also addressing childhood care early. The goal is to increase enrollments of kids ages 3-6 from 41% to 65% or above in 2015. The other two remaining goals are to set up a “multi-dimensional and multi-level ICT and modern distance education system” and to construct a “learning society through improving vocational education and continuing education/training for adults” (Jing & Hu, 2007, p. 7).

From a transformational leadership perspective and the launch of the NCATE and TESOL programs, there are several implications that follow for teachers as a result. The first and most important implication is that evidence is shown in the investments the Chinese government is making to ensure that they equip teachers with better resources and learning opportunities for them to lead their students. We also see formalized certification programs where teachers can continually build on their resume and receive recognition for their work. The result of this shows increased motivation and drive for teachers to pursue these programs to better their own education. Finally, teachers maximize their continual learning capacity through the offerings of both in classroom and online training.

The implications of the Early-Childhood Theory and the projects rolled out around UNICEF and the CFS project shows the importance of investing in a child’s education earlier on in their lives. By doing so, they not only see more value in education, but their commitment to
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO
STUDENT LEARNING

their schooling increases, thereby increasing their likelihood to graduate and to find a good
career to support themselves and others. The implementation of these projects also show that any
student can be successful in getting to a prestigious university, even the ones that live in rural
areas.

We have also seen many implications with regards to The New National Curriculum and
the Social Penetration Theory. Students that have a closer relationship with their teachers tend to
be more committed to their studies and overall tend to learn at a higher capacity. They are more
likely to ask more questions in class, raise their hands to answer questions, and the result is
increased learning for the students. The implications for teachers are also great. It results in a
culture shift in that teachers in China do not have to use scare tactics to enforce discipline. If a
teacher has a good relationship with their student, then that teacher can use kinder words or
softer disciplinary action to encourage discipline. Students are also more receptive to being
disciplined if their teacher does not intimidate them.

Finally, the rollout of technology into the classrooms implies greater flexibility for both
teachers and students. Teachers can provide students two ways to learn now: in person or
through online pre-recorded webcasts. Students who work during the day can study online in the
evenings. The most important implication of all is that these students now have equal
opportunities to learn and graduate from their coursework just like any other student.
Chapter 5: Summaries and Conclusions

Limitations of the Study

While the programs launched in China were used to drive education opportunities for students around the country, it is also important to look at another perspective that if one looks at the technology trends today, there are still many parts of the world where technology is not being adopted. Part of the reason is the disbelief of technology and its value. There are countries in this world that frown upon technology because they believe that technology strips students away from the basic necessities of learning. For example, students depend on calculators way too heavily today to do simple calculations as opposed to relying on mathematical principles to calculate an answer to a given question. Technology can also open up the world to the Internet where unwanted sites can sometimes hinder students from learning as well. So there are certainly gaps and downsides to technology. But this also goes back to the importance of integrating transformational leadership back to technology. The disadvantages of technology can be avoided if proper principles of transformational leadership are put in place to ensure that the right learning environment is set for students.

Additionally, certain other challenges can surface in terms of driving education opportunities for students through technology. For one thing, finances/budget and the ability to afford and set up an IT infrastructure can be costly, especially when you add up the hardware and software purchases. Maintenance and having an operating IT environment will be another important challenge that will need to be addressed for this initiative to be successful. Additionally, this study is limited to programs implemented in the summer. This is typically the best transition time for volunteer organizations to train students on how to use technology to improve their education and for training programs to be rolled-out for teachers’ training and
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

development. Time is a factor because if students and teachers are busy during the summer, their opportunities to learn and be trained are limited during other parts of the season. Another limitation to this study is the measurement system of the four theories used. Transformational leadership, the early childhood theory, the Social Penetration Theory, and the Media Richness Theory are all subjective in themselves, and though there are various ways to see if other factors affect these theories, these four principles are difficult to measure in general. The result is the challenge we see in ensuring that these studies are repeatable and reproducible to other third world communities.

Cultural differences are also another limitation to the study. This particular research was focused on the culture of China along with the corresponding theories and methodology. If this research was replicated and reproduced to other geographies, culture would be an important component to address, which could then affect the type of communication and leadership theory that was used.

We see through these studies the importance of helping students with their continued education and success. They represent 25% of the world’s population. For the parts of the world that overlook student education or do not prioritize its importance in the country’s initiative, the consequences can be drastic. Students are the future for our world.

Recommendations for Further Study

This study focused primarily on students that live in a third world community within China. This study also focused on the four theories analyzed in this research in conjunction with meta-analysis. To further this study in the future, it is important to look and determine that the research is repeatable and reproducible to other areas around the world. If the research truly is repeatable and reproducible, than it means that the measurement system analysis that was
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

created shows true significance in driving education growth for students. So the next step would be to replicate this research to another third world community. Additional research on how students in third world communities are raised can prove to be useful as it can allow the government to determine how to create customized programs that cater to those students’ needs. Additionally, it would be important to determine if culture plays a defining factor in determining the outcome of student learning. If it does, then it could impact the theories that are implemented, which then opens up the possibility of determining if other theories can also be used to drive student learning in third world communities.

Another recommendation to look into is the idea of waste. What is important to develop is not necessarily coming up with a new program that no other organization has thought of before. Sometimes it is not about reinventing the wheel but rather improving upon it. So another recommendation is to take a look at the most impactful educational programs used around the world, build upon it, and create a strategy that drives process improvement in that country. It will be important to think and consider the resources needed to implement these solutions and what steps are needed to eliminate waste and ensure the most efficient but also effective process possible that drives continual student learning in third world communities.

Conclusions

In the future, we will see a continual increase in how technology is adopted around the world. Specifically, online course programs are growing exponentially each year, so it is important to understand the economic trends we see that is projected to continually grow in the future and what is needed to drive these types of programs in other parts of the world (Unpublished manuscript, 2008, p. 1). Technology in tandem with transformational leadership can help bridge the gap between the challenges students face today in third world communities.
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

and opening up doors and opportunities for continued learning. For those that are forced to work at a young and early age, online virtual classrooms are being adopted more and more to offer night classes. For students that cannot afford a computer, the “One Laptop Per Child” program helps them with those needs, and these are just a few examples that are shown.

To go back to Su-Chou’s situation above and to put a happy ending to his story, he went on to break all barriers by being one of the first orphans in the village to be accepted into one of the top ten universities in China. This was the result of an initiative my friends and I started by traveling to China each year to teach orphan students English in rural areas and helping them learn through online-virtual classroom programs. So at this point, we understand what the voice of the student is and their level of expectation from an education standpoint. We also understand what parties are needed to make this initiative successful, and we have taken a look at various programs and examples that have been a success in the past. Moving forward, if the end goal is to create a sustainable program that drives student learning through technology and transformational leadership, a communication plan will need to be developed by all stakeholders involved, and a process needs to be put in place to ensure that best practices can be repeated and replicated. A measurement system for success will also need to be developed as well as ways to obtain data to measure improvement. Once all of these factors are in place, the implementation of the technology needs to take place. To ensure sustainability, a control plan will need to be developed and show how this initiative will move from a pilot phase to one that a whole region or country can benefit towards. By implementing these steps, this initiative will drive towards improving student learning in third world communities.
TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

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TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING


TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING


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TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING


TRANSFORMATIONAL LEADERSHIP AND TECHNOLOGY CONTRIBUTING TO STUDENT LEARNING

Appendix

Figure 1. The Fishbone Diagram applied to the research work conducted.

Figure 1. The Fishbone Diagram. Adapted from “The Fishbone Diagram,” by Kaoru Ishikawa. Copyright 1985. Adapted with permission.