Factors that Promote Transformative Learning Experiences of International Graduat-Level learners

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Factors that Promote Transformative Learning Experiences of International Graduate-Level Learners

by

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Dedication

This document is dedicated to my dear mother Grace Ampofo, whose effort, support, and encouragement allowed me to reach this stage of my academic pursuit; and to my wife Joyce Asuako who supported me on this long academic journey.

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# Table of Contents

Chapter 1 Introduction .................................................................1  
Introduction .................................................................................1  
Statement of the Problem ..........................................................4  
Purpose of the Study .....................................................................6  
Research Questions .......................................................................7  
Theoretical Framework ....................................................................8  
Significance of the Study .............................................................10  
Limitations of the Study .............................................................11  
Definitions of Terms .....................................................................12  
Organization of the Study ...........................................................14  

Chapter 2 Literature Review .......................................................15  
Transformative Learning Theory ................................................15  
International Adult Learners .....................................................24  
Factors that Promote Transformative Learning ............................29  
  Critical Thinking .......................................................................30  
  Personal Self-Reflection ............................................................32  
  Classroom Discussions and Dialogues .......................................34  
  Mentoring .................................................................................37  
Learning Activities Survey ..........................................................39  
  Reliability of the Learning Activities Survey ............................41  
  Validity of the Learning Activities Survey .................................41  
Research Studies Using the Learning Activities Survey ...............42  
Summary ......................................................................................53  

Chapter 3 Methods .....................................................................56  
Research Design ...........................................................................56  
Research Questions .......................................................................60  
Population and Sample ...............................................................61  
Learning Activities Survey ..........................................................61  
  Learning Activities Survey Questionnaires ...............................62  
  Learning Activities Survey Follow-Up Interview .......................64  
Demographic Information .............................................................65  
  Validity of the Learning Activities Survey .................................66  
  Reliability of the Learning Activities Survey .............................67  
Pilot Study ....................................................................................69  
Results .........................................................................................70  
Follow-Up Interviews ....................................................................80
<table>
<thead>
<tr>
<th>Collection of Data</th>
<th>.................................................................</th>
<th>82</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantitative Phase</td>
<td>...........................................................</td>
<td>83</td>
</tr>
<tr>
<td>Qualitative Phase</td>
<td>...........................................................</td>
<td>84</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>.................................................................</td>
<td>85</td>
</tr>
<tr>
<td>Quantitative Phase</td>
<td>...........................................................</td>
<td>85</td>
</tr>
<tr>
<td>Reliability and Validity</td>
<td>........................................</td>
<td>87</td>
</tr>
<tr>
<td>Qualitative Phase</td>
<td>...........................................................</td>
<td>89</td>
</tr>
<tr>
<td>Reliability and Validity</td>
<td>........................................</td>
<td>90</td>
</tr>
<tr>
<td>Ethics</td>
<td>.................................................................</td>
<td>91</td>
</tr>
<tr>
<td>Summary</td>
<td>.................................................................</td>
<td>92</td>
</tr>
</tbody>
</table>

**Chapter 4 Findings** ................................................................. | 94 |
| Response Rate and Demographic Information Analysis | ................................... | 94 |
| Discussion of Findings ....................................................... | 100 |
| Research Question One ....................................................... | 100 |
| Follow-Up Interviews ........................................................... | 115 |
| Research Question Two .......................................................... | 120 |
| Research Question Three ....................................................... | 127 |
| Research Question Four .......................................................... | 140 |
| Open-Ended Response .............................................................. | 144 |
| Observations .......................................................... | 147 |
| Summary ............................................................. | 149 |

**Chapter 5 Summary, Conclusions, Implications, and Recommendations** ........................................ | 152 |
| Summary ............................................................. | 152 |
| Conclusions .............................................................. | 156 |
| Implications .............................................................. | 157 |
| Recommendations ............................................................. | 161 |

**References** ................................................................. | 164 |

**Appendices** ................................................................. | 174 |
| Appendix A | Original Learning Activities Survey ........................................ | 175 |
| Appendix B | The Learning Activities Survey Follow-Up Interview Questions ........................................ | 179 |
| Appendix C | Letters of Authorization .............................................................. | 182 |
| Appendix D | Modified Learning Activities Survey ........................................ | 185 |
| Appendix E | Letter to Participants .............................................................. | 192 |
| Appendix F | Presentation to Participants ....................................................... | 195 |
| Appendix G | Institutional Review Board Approval Letter ................................ | 197 |

**About the Author** ................................................................. | 199 |
List of Tables

Table 1: Types of Information Gathered for Each Questions and Means of Measurement (LAS) .................................................................68

Table 2: Crosstabulation of Responses for Educational Factors by Pilot Study 1 and 2 ............................................................................73

Table 3: Crosstabulation of Responses for Non-Educational Factors by Pilot Study 1 and 2 .................................................................75

Table 4: Crosstabulation of Responses for Critical Thinking by Age Group ............76

Table 5: Crosstabulation of Responses for Classroom Discussion by Age Group .................................................................77

Table 6: Crosstabulation of Responses for Personal Self-Reflection by Age Group .................................................................78

Table 7: Crosstabulation of Responses for Critical Thinking by College ...............78

Table 8: Crosstabulation of Responses for Classroom Discussion by College .................................................................79

Table 9: Crosstabulation of Response for Personal Self-Reflection by College ..................................................................................80

Table 10: Frequency Distribution of Age Group.................................................................96

Table 11: Frequency Distribution of Participants by College ........................................96

Table 12: Frequency Distribution of Participants by Gender ........................................97

Table 13: Frequency Distribution of Participants by Continent of Birth .................97

Table 14: Frequency Distribution of Participants by Number of Semesters ...............98

Table 15: Frequency Distribution of Participants by Number of Years .....................99

Table 16: Frequency Distribution of Participants Response to Question 4 (persons who influenced change) ......................................102
Table 17: Frequency Distribution of Educational Factors ...........................................103

Table 18: Frequency Distribution of Non-Educational Factors ...............................104

Table 19: Frequency and Percentages of Participants Response to Question 10 by Those Not reporting to Transformative Learning ..........................105

Table 20: Frequency and Percentages of Participants Response to Question 11 by Those Not Reporting to Transformative Learning .......................106

Table 21: Frequency and Percentages of Participants Response to Question 12 For Those Identifying the Single Most Important Person .................................107

Table 22: Frequency Distribution of Specific Educational Factors Identified as Being Most Influential .................................................................108

Table 23: Frequency Distribution of Specific Non-Educational Factors Identified as Being Most Influential .................................................................109

Table 24: Crosstabulation of Responses by Participants Reporting Educational Transformative Learning Experiences .................................................111

Table 25: Crosstabulation of Responses by Participants Reporting Non-Educational Transformative Learning Experiences ....................................114

Table 26: Percentage Responses of Participants Who Experienced Transformative Learning and Those Who Did Not Experience Transformative Learning ......121

Table 27: Percentage Response of Participants Who Experienced Transformative Learning by Educational and Non-Educational Factors .........................121

Table 28: Percentage Response of Participants Who Experienced Transformative Learning and Those Who Did Not Experience Transformative Learning by Gender ........................................122

Table 29: Percentage Response of Participants Who Experienced Transformative Learning and Those Who did Not Experience Transformative by Age Group ........................................124

Table 30: Percentage Response of Participants Who Experienced Transformative Learning and Those Who did Not Experience Transformative by College ........................................125

Table 31: Percentage Response of Participants Who Experienced Transformative Learning and Those Who did Not Experience Transformative by Continent of Birth ........................................126
Table 32: Frequency of Participants Reporting Transformative Learning Experiences .................................................................127

Table 33: Crosstabulation of Responses for Educational Factors by Gender ........................................................................129

Table 34: Crosstabulation of Responses for Non-Educational Factors by Gender ....................................................................131

Table 35: Crosstabulation of Responses for Educational Factors by Age Group ........................................................................133

Table 36: Crosstabulation of Responses for Non-Educational Factors by Age Group ....................................................................135

Table 37: Crosstabulation of Responses for Educational Factors by Continent of Birth .................................................................137

Table 38: Crosstabulation of Responses for Non-Educational Factors by Continent of Birth ................................................................139

Table 39: Crosstabulation of Responses for Educational Factors by College .................................................................................141

Table 40: Crosstabulation of Responses for Non-Educational Factors by College .............................................................................143
Abstract

The purpose of this study was to examine factors that promote the transformative learning experiences of international graduate-level learners. This study was conducted to analyze how international graduate students experience transformative learning through educational and non-educational experiences.

Identification of factors unique to international graduate students could enhance the curriculum in American universities addressing the learning needs of international graduate students. Participants included international graduate students from Africa, Asia, Europe, and Latin America in the two Colleges of Arts and Sciences and Engineering. Mezirow’s theory of transformative learning (1978) was used as the theoretical framework for this study. A paper version of the modified Learning Activities Survey instrument was used to collect data for this study. A pilot study was conducted to establish the integrity of the data collection methods, evaluate the viability of the interviews, and assess the performance of the modified instrument for data collection.

Of the 560 surveys that were distributed, 421 of them were completed and returned. Overall, 79.6% of the participants reported that they had experienced transformative learning while 20.4% reported that they had not experienced transformative learning. Among participants who experienced transformative learning, 32.3% of the transformative experiences were associated with education, 29.4% reported both educational and non-educational transformative learning experiences, while 17.9% were non-education. Nine participants who experienced transformative learning were
selected for follow-up interviews. These individuals were randomly selected to ensure representation across gender, age group, continent of birth, and college. This group identified classroom activities as the educational transformative learning and factors related to major life changes as non-educational.

The majority of the participants experienced transformative learning as a result of both educational and non-educational experiences. The categories from the open-ended response questions were similar to the educational and non-educational factors (mentoring, classroom discussions, new life experiences). This research demonstrated that classroom discussions, mentoring, and major life changes emerged as the major factors across all three data sets.
Chapter 1

Introduction

As part of their academic journey in the United States, international adult learners experience different phases of transformations in reference to past educational, personal, and social experiences. For example, most international adult learners from Africa, Asia, Australia, the Middle East, Latin America, and Europe receive formal schooling that is different from the educational system in the United States. According to the Institute of International Education’s (2009) Open Doors Report, the rapid global changes in the social, economic, technological, political, and academic environments have led to an increase in the population of international students in the United States. Upon entry to the United States, international students are introduced to different academic, social, economic, environments, and cultures. It is incumbent upon them to learn and adapt to the paradigms of change in the social, economic, cultural, academic, and psychological life in their new destination (Erichsen, 2009; Kung, 2007; Ritz, 2006, 2010).

As international students undergo transformational phases, they begin to reflect on their beliefs, values, opinions, and assumptions. They understand that they are in a new environment and must learn to cope with the challenges presented, pursue their aspirations in spite of these challenges, and take advantage of the opportunities available. Some of these changes present a significant barrier and may lead to challenges and frustrations in their academic and social lives. International adult learners migrate to the United States from different parts of the world where the goal is to acquire formal
education with degrees that allow them to compete in the global environment. In turn, educators and policy makers in the United States are required to provide these students with learning experiences that enhance their ability to learn and adapt to their new cultures. International adult learners may have to change their way of viewing culture and education during the process of adaptation to the cultures in the United States. This necessitates transformation of their attitudes, actions, opinions, beliefs, and assumptions. It implies that the international adult learners will undergo experiences that transform their learning situation. The factors that facilitate this transformation of learning have been previously identified among various adult populations. If those factors that are unique to this population can be identified, the curricula in American universities can be enhanced to address the learning needs of all international adult learners.

According to the Institute of International Education’s (2006) Open Doors Report, approximately 564,766 of international students enrolled in United States higher education institutions in 2005/2006. The number of international students increased by 7% to a record high of 623,805 in the 2007/2008 academic year. Further increases were noted from 3.3% in 2006/2007 to 3.5% in 2007/2008, and a 3.7% increase in 2008/2009. In 2008/2009, the population of international students in the United States increased by 7.7% over the previous year to a high of 671,616 students.

The Institute of International Education’s (2010) Open Doors Report states that the number of international students at colleges and universities in the United States increased to 690,923 and international enrollments at the graduate level increased to 293,885 during the 2009/10 academic year. Moreover, international students contributed $13.49 billion in 2005/2006 and nearly $20 billion in the 2010 to the United States
economy for tuition and fees, living expenses, and related costs. The majority of the international students emigrate from Asia, Europe, Latin America, Africa, and other North American countries (Institute of International Education, 2010).

In the 21st century, acquisition of an advanced degree allows international adult learners to be competitive for employment, especially when this academic degree is received in an institution within the United States (Erichsen, 2009; Kung, 2007). As such, most countries (both developed and developing) sponsor international adult learners who intend to pursue advanced degrees in the United States on condition that they return and contribute to the development of their country of origin. The desire to study in the United States also stems from the availability of educational resources and other amenities such as technology, communication, and financial assistance granted in terms of scholarships.

According to Taylor (2008), in the present diverse and globalized world, there is interdependency with the environment where people face constant life changes and all adult learners experience transformative learning to attain new knowledge. Additionally, international adult learners pass through different stages of learning experiences as part of their academic journey in the United States. The educational systems in many countries from which international adult learners originate are based on the British or French traditional educational systems, where the curriculum involves little or no student participation in the classroom, critical reflection, project-based learning, and research projects. In this educational system, the teacher becomes the center of attention (teacher-centered learning) and students depend on teachers for knowledge within this framework. Acquisition of knowledge is more of rote memorization and sequentialing in the
processing of information. Students are hardly allowed to question authority. Freire (1970) referred to this as “the banking” method of learning in which the teacher deposits information to those students whom the teacher deems worthy of receiving the gift of knowledge. Due to such characteristics of learning within international adult learners’ countries of origin, the ability to develop critical thinking is limited. Student’s opportunity to develop critical consciousness and become conscientized to intervene in their world as transformed students is minimal. According to Freire (1970), the more students work at storing the deposit work entrusted to them, the less they develop the critical consciousness.

According to Mezirow (1996), transformative learning is well grounded in human communication, where learning is understood as the process of using a prior interpretation to construe a new or revised interpretation of the meaning of one’s experience in order to guide future action. Ritz (2010) contends that adults are better prepared than children to evaluate the soundness of their understandings, beliefs, and the dependability of their way of making meaning of new experiences. As such, according to Taylor (2008), there is the need for experts to investigate the trends and factors that promote transformative learning among adult learners, specifically international adult learners.

**Statement of the Problem**

Much research has been conducted with regards to the academic journey of international adult learners. However, there have been few mixed-methods studies concerning factors that promote transformative learning experiences of adults in higher education, specifically international adult learners (Taylor, 2000). Adult learners
transform their perspectives from one stage to another in order to adapt to the academic and social paradigms in the United States (Mezirow, 1990). International adult learners are motivated students who bring to the classroom an array of personal experiences, different learning styles, personality traits, cultures, and educational backgrounds. They transition in an American higher education institutions or systems with the aim of seeking opportunities in education and improving their life styles. The teaching-learning process in American higher education is a life-changing phenomenon for the international adult learner.

According to Cragg, Plotnikoff, Hugo, and Casey (2001), it is important to recognize the experiences of adult learners as they engage in learning in the classroom. Thus, education of international adult learners allows them to obtain the tools for dialogue, understanding, and functioning as they receive the opportunity to move them toward an awareness of their academic and non-academic experience (Hart, 2001).

Major researchers on transformative learning (Cranton, 1994, 1996; King, 1997b, 2000, 2005; Mezirow, 1991a, 1995, 1996, 2000) agree that transformative learning is the process of affecting change in a frame of reference. Frames of references are the structures of assumptions through which adult learners understand their experiences. Adults have acquired a coherent body of experiences such as associations, concepts, values, feelings, and conditions as well as frames of reference that define their world (Cranton, 1994, 1996; Mezirow, 1991a, 1996, 2000). This process calls for self-critical reflective thinking to focus on the learners’ beliefs, values, and understanding of diverse learning concepts (Brookfield, 1986, 1995; Cranton, 2002; Mezirow, 2000).
Educators in the field of adult and higher education have less information about the specific factors that promote transformative learning experiences of international graduate-level learners in relationship to colleges and demographic characteristics. Few studies have investigated the factors that promote transformative learning experiences of international graduate-level learners as related to demographic characteristics and colleges. Therefore, research to examine factors that promote transformative learning of international graduate-level learners using a mixed-methods design would enhance the understanding of issues faced by international graduate learners as they pursue their education within the U.S.

**Purpose of the Study**

The purpose of this study was to examine factors that promote transformative learning experiences of international graduate-level learners. This study addressed factors that promote transformative learning in relation to the demographic characteristics and colleges of the international graduate-level learners. Research also addressed how international adult learners connect newly acquired information to past experiences in relationship to the factors that promote transformative learning. Taylor (2008) asserts that conducting research on factors that facilitate transformative learning among adult learners offers the opportunity to recognize the relationship between transformative learning and other important variables.

Secondly, this study utilized an instrument to test factors that are known to promote transformative learning experiences of international graduate-level learners and as a result, determined the percentage of international graduate-level learners who appeared to experience transformative learning. The study measured the relationship
between factors that promote transformative learning and demographic characteristics and colleges of international graduate-level learners.

This study further investigated how transformative learning is promoted among international graduate-level learners based on their educational and non-educational experiences. Due to the fact that the majority of studies conducted in transformative learning of adult learners in higher education utilize qualitative methods that provided valuable information on transformative learning about the personal journeys of transformation (King, 1997a). However, the studies do not specifically describe the significance of using such methods. Thus, this study used a mixed-methods design (quantitative and qualitative) to gather data from international graduate-level learners to ascertain the major factors that promote transformative learning.

**Research Questions**

The current study examined factors that promote transformative learning experiences of international graduate-level learners. According to Mezirow (2000), taking action on the transformed perspective and acquiring a disposition to critically reflect on assumptions through discourse help the adult learner to be aware of factors that facilitate them and put transformed insight into action. According to Cranton (1994), Kegan (2000), and Taylor (2000), there is the need to respond to inquiries concerning how international adult learners reflect, refine, and build new connections or new perspectives. Specifically, the study addressed the following research questions:

1. What are the factors that promote transformative learning experiences of international graduate-level learners?
2. What proportion of international graduate-level learners appear to have had transformative learning experiences?

3. Do the factors that promote transformative learning experiences of international graduate-level learners differ by demographic characteristic?

4. Do the factors that promote transformative learning experiences of international graduate-level learners differ by college?

**Theoretical Framework**

Transformative learning is the process of critically reflecting upon previous assumptions or understanding in order to determine whether one still holds them to be true or challenges their claims (Mezirow & Associates, 2000). According to Mezirow (1995), transformative learning involves an analysis of meaning structures of adults and how they are transformed through reflection, rational discourse, and emancipatory action. The education of adults is understood as organized activity facilitative of the process. The “ideal conditions for reflection, critical reasoning, and discourse in adult learning suggest that reflective learning society provide the foundation for a philosophy of adult education” (Mezirow, 1995, p. 39). Learning could be “understood as the process of using a prior interpretation to construe a new or revised interpretation of the meaning of one’s experience in order to guide future action” (Mezirow, 1996, p. 162). According to Cranton (1994), the underlying theme of transformative learning is that the adult learner will have the ability to reflect, refine, and build new connections through rational discourse as they engage in critical reflection, and discussion related to the course content.
Many theories of knowledge inform such a perspective. A number of these are Habermas’s theory of communicative action, Heidegger’s analysis of human experience, Brookfield’s theory of critical reflection, and Boyd’s concept of individualization. Other theories of transformative learning deal with the emotional, cognitive, spiritual, and communicative process as the main concept of learning for adult learners as compared to the critical reflection proposed by Mezirow (Brookfield, 1995).

According to Taylor (2000), there are other theories of transformative learning that place emphasis on the psychological and emotional parts of the individual and consider the transformation of the adult learner’s personality or social transformation. King (2009) contends that Mezirow’s transformative learning theory provides an explanation of the adult learner’s experiences of fundamental change in their perspective or frame of reference as they engage in educational or academic work. Learning is seen as an experience of critical questioning of beliefs and assumptions as the adult learner examines the framework from which he/she has been viewing the world.

According to Mezirow (1991a), transformative learning occurs through the following 10 tenets: (a) a disorienting dilemma; (b) self-examination with feelings of guilt or shame; (c) a critical assessment of assumptions of epistemic, socio-cultural or psychic assumptions; (d) recognition that one’s discontent and the process of transformation are shared and that others have negotiated a similar change; (e) exploration of options for new roles, relationships, and actions; (f) planning a course of action; (g) acquiring knowledge and skills for implementing one’s plans; (h) provisional trying of new roles; (i) building competence and self-confidence in new roles and relationships; and (j) a reintegration into one’s life on the basis of conditions dictated by
one’s new perspective (Mezirow & Associates, 2000). These 10 tenets represent the phases of transformations that constitute the basis of the Learning Activities Survey to be used for gathering information about the learning activities that promote transformative learning experiences of international graduate-level learners. Mezirow’s theory of transformative learning (1978, 1991a, 2000) described above will provide the theoretical framework for this research study. It embraces the constructivist philosophy of learning where learners build from experiences and construct knowledge and meaning (Merriam & Caffarella, 1999).

This theory also utilizes the concept of critical reflection, dialogue, rational discourse, which occurs through the adult learner’s educational experience. Finally, it allows for individual interpretation of life experiences, creating transformation which results growth and development (Merriam, Caffarella, & Baumgartner, 2007).

Significance of the Study

As reported by Kegan (2000), it is not so much changes in what adult learners know, but changes in how adult learners know that depicts transformational learning. The outcome of this study will contribute to knowledge of transformative learning of international graduate-level learners experience as related to their demographic origins and colleges. In addition, considering the fact that transformative learning theory has been primarily investigated using qualitative methods among adult learners in higher education (Taylor, 1997).

This study employs a mixed-methods which will provide valuable information and contribute to the limited quantitative research on transformative learning experiences of international graduate-level learners through educational factors such as critical
thinking, classroom discussions and dialogues, personal self-reflection, assigned readings, term papers/essays, class projects, laboratory experiences, mentoring and non-educational factors such as marriage, moving/relocation, change of job, loss of job, divorce/separation, death of a loved one, and learning new culture help to promote perspective transformations of international graduate-level learners. Results from this research will provide valuable data to faculty and adult educators regarding which learning activities or strategies to use in the classroom to help international graduate-level learners reflect and contribute to in class discussions.

The study results will also help faculty members revise their syllabi to suit the needs of international graduate-level learners. The research report will provide detailed information to curriculum planners and policy makers in various public and private universities in America to know which teaching methods and orientation programs best facilitate international graduate-level learners abilities to integrate, transfer, and reflect on their experiences successfully. In summary, although this study does not address the role culture and socio-economic background of international graduate-level learners play on transformative learning, it provides the prerequisite direction by looking into the nature of transformative learning the international adult learners experience during their stay in the United States.

Limitations of the Study

This study was conducted with sample population of international graduate-level learners. Because this study was limited to international graduate-level learners from Africa, Asia, Europe, and Latin America, the researcher could not make conclusions about factors that promote transformative learning experiences of other international
graduate-level learners attending USF. Moreover, the study was conducted using a paper version of the instrument, possibly leading to a bias in the scoring and coding of the survey.

This study did not take into account international graduate-level learners in other universities across United States. The scope and range of information researcher’s information was limited the researcher from making any conclusions about international graduate-level learners in other universities. Furthermore, this study was limited to international graduate-level learners in the Colleges of Arts and Sciences and Engineering. The researcher could not make any generalizations from the results in relation to other colleges.

Finally, this study did not take into account international graduate-level learners in other universities in the state and the nation. The researcher could not make any conclusions of results about factors that promote transformative learning experiences of international graduate-level learners in other universities in Florida and within U.S. The follow-up interview section in this study was used to expand on the results of the quantitative phase and international graduate-level learners were asked to volunteer for the interview. The study did take into consideration other populations who experienced transformative learning and were not selected for the follow-up interviews. Follow-up interviews with large sample size would augment for better results and conclusions.

**Definition of Terms**

Operationalized definitions of major terms in the study are provided to highlight their meaning in relation to this study.
Age: International graduate-level learners in the age groups of 20-29, 30-39, 40-49, and above 49 years.

College: Major academic degree programs of more than one course listed in the colleges of Arts and Sciences and Engineering in which participants for the study are enrolled to pursue academic degree.

Factors that promote transformative learning: Learning activities such as critical thinking, personal self-reflection, classroom discussions and dialogues, and mentoring will be addressed as factors that promote transformative learning.

Geographical region/Continent of birth: This will include international graduate-level learners from Africa, Asia, Europe, and Latin America including countries in South America.

International graduate-level learners: Adult learners who are not U.S. citizens or permanent residents of the United States and enrolled in a graduate program and are usually required to have an F1 (student) or J1 (exchange visitor) visa to study in the United States to allow them to pursue a full course of academic study.

International student: anyone studying at an institution of higher education in the United States on a temporary visa that allows for academic coursework. These include primarily holders of F (student) visas and J (exchange visitor) visas (Institute of International Education, 2010).

Mentoring: Mentoring is the means of providing psychological, emotional, and technical assistance to the learner when needed.
**Perspective transformation:** Perspective transformation is the process of becoming critically aware of how and why presuppositions have come to constrain the way people perceive, understand, and feel about the world (Mezirow, 1978, 1991a, 1994, 2000).

**Transformative learning:** The process whereby adult learners critically examine their beliefs, values, and assumptions in light of acquiring new knowledge and begin a process of personal and social change called reframing in perspective (Mezirow, 1990, 1994, 2000).

**Organization of the Study**

This study comprises of chapters one, two, three, four, and five. Chapter one of the study includes the introduction, statement of the problem, purpose of the study, research questions, significance of the study, and definitions of terms. Chapter two comprises of a literature review and explores the international adult learner, transformative learning theory, factors that promote transformative learning, the *Learning Activities Survey* (instrument), research studies using the *Learning Activities Survey*, and summary of the research. Chapter three consists of the methods utilized for this study includes the research design, research questions, population and sample, *Learning Activities Survey* (instrument), demographic information, pilot study, collection of data, data analysis, ethics, scoring of instrument, and a summary. Chapter four describes the findings of the study and Chapter five consists of the summary, conclusion, implications, and recommendations.
Chapter 2

Literature Review

The purpose of this study was to examine factors that promote transformative learning experiences for international graduate-level learners. This review includes transformative learning theory as the theoretical framework, international adult learners, factors that promote transformative learning, the Learning Activities Survey, research studies using the Learning Activities Survey, and a summary.

Transformative Learning Theory


Transformative learning has been defined recently as changing a problematic frame of reference to make it more fitting and dependable by generating opinions and interpretations that are more justified, that is, the adult learner becomes critically reflective of the beliefs and frameworks that become problematic for adult educators. Transformations may be sudden, dramatic and epochal, reorienting insight, or they may be incremental involving a progressive series of changes in related points of view that result in a transformation of perspective or habit of mind (Mezirow & Associates, 2000).
According to Ritz (2010), transformative learning among international students varies due to factors such as differing cultures, languages, educational background, and personality traits.

Transformative learning was first identified among women re-entering higher education by Mezirow (1978). He investigated the experiences of these women as rather than merely adapting to changing circumstances by more diligently applying old ways of learning and discovering a need to acquire new perspectives in order to gain a more complete understanding of changing events. According to Mezirow (2000), transformative learning may be deliberate and mindful, involving critical reflection, or it may be a result of repetitive interactions outside of the consciousness, the result of recurring communication and contact or mindless assimilation as in moving to a different culture and uncritically assimilating its canon, norms, and ways of thinking. Mezirow (2000) agreed that the adult learner is the first theme of transformative learning based on the assumption that adults have acquired a coherent body of experience—assumptions, concepts, values, feelings, and conditioned responses—frames of reference that define their world.

Mezirow (1991a) outlined three types of reflection on experience: content, process, and premise. Content reflection is the thinking about the actual experience itself; process reflection involves thinking of how to handle the experience; and premise reflection involves examining long-held, socially constructed assumptions, beliefs, and values about the experience or problems. Premise reflection, or critical reflection on assumptions, can be about assumptions adults hold in regard to their self (narrative), the cultural system in which they live (systemic), the workplace (organizational), the ethical decision making
Adult learners have acquired a coherent body of experiences such as associations, concepts, values, feelings, and conditioned responses in their frame of reference that defines their life world. Frames of reference are the structures of assumptions through which adult learners understand their experiences (Cranton, 1994, 1996; Mezirow, 1991a, 1994, 1998, 2000). Frames of reference selectively shape and delimit expectations, perceptions, cognition, and feelings. The concept of frame of reference is made up of two dimensions, namely habit of mind and point of view. Habit of mind is a broad, abstract, orienting, habitual way of thinking, feeling, and acting that is influenced by assumptions that constitute a set of cultural, political, social, educational, and economic codes (Mezirow, 1997). It also includes dimensions of sociolinguistic, moral-ethical, epistemic, philosophical, psychological, and aesthetic perspectives, which include sets of immediate specific expectations, beliefs, feelings, attitudes, and judgments (Mezirow, 2000). The habit of mind is expressed in a particular point of view to include the constellation of beliefs, value judgment, attitude, and feelings that shape a particular interpretation. The habit of mind is more durable and subject to change and the process by which adult learners solve problems and identify the need to modify assumptions (Mezirow, 1997).

Mezirow (1978) described perspective transformation as the process of how adult learners could revise their meaning structures. Perspective transformation is the process of becoming critically aware of how and why presuppositions have come to constrain the way people perceive, understand, and feel about the world. According to Mezirow and Associates (2000), perspective transformation is a means of reformulating assumptions to
permit a more inclusive, discriminating, permeable, integrative perspective, and of
making decisions. More inclusive, discriminating, permeable, and integrative
perspectives are superior perspectives that adults choose if they can, because they are
motivated to better understand the meaning of their experience.

Cranton (2000) disclosed that through perspective transformation experiences,
adult learners shift their understanding or assumptions in order to cope with new
information. They apply new knowledge to their lives. They go beyond the mere
recitation of the teacher’s lessons. These learners experience how new ideas and
information can impact and “unbalance” their beliefs, values, and ways of understanding.
The radical changes they experience are often significant steps to a lifelong journey
toward their full potential. Perspective transformation also occurs through a series of
cumulative transformed meaning schemes or as a result of an acute personal or social
krisis. For example, the adult learner could experience perspective transformation
through a natural disaster, the death of a significant other, becoming a refugee, job loss,
war, divorce, or a debilitating accident. These experiences are sometimes stressful,
painful, and can cause individuals to question the core of their existence (Mezirow,
1997).

It is the act of culturally defined frames of reference that is inclusive of meaning
schemes and meaning perspectives. Meaning perspectives are a general frame of
reference, worldview, or personal paradigm involving “a collection of meaning schemes”
made up of higher-order schemata, theories, propositions, beliefs, prototypes, goal
orientations and evaluations” (Mezirow, 1990, p. 2). Meaning perspectives operate as
perceptual filters that organize the meaning of the learner experiences. As the new
experience is assimilated into these structures, it either reinforces the perspective or gradually stretches its boundaries depending on the degree of congruency. The transformed meaning perspective is the development of a new meaning structure that results in the individual questioning previously held values and beliefs.

Brookfield (1986) shared a similar view by stating that personal learning is the act in which the adult learner comes to reflect on self-image, changes self-concepts, questions previously uncritically internalized norms, and reinterprets his/her current and past behavior in light of new perspectives. Merriam and Caffarella (1999) noted that learning from experience involves one’s readiness to acknowledge an experience (concrete experience), viewing the experience from a different perspective (reflecting observation), the ability to analyze so that ideas and concepts can be developed (abstract conceptualization), and the ability to put into practice concepts learned (active experimentation) based on Kolb’s learning theory.

Mezirow’s original research explained 10 phases of perspective transformation, namely (a) a disorientating dilemma; (b) self-examination with feelings of guilt or shame; (c) recognition that one’s discontent and the process of transformation are shared and that others have negotiated a similar change; (d) exploration of options for new roles, relationships, and actions; (e) a critical assessment of assumptions; (f) provisional trying of new roles; (g) planning of a course of action; (h) acquisition of knowledge and skills for implementing one’s plans; (i) building of competence and self-confidence in new roles and relationships; and (j) a reintegration into one’s life on the basis of conditions dictated by one’s new perspectives (Mezirow, 1978, 1991a, 2000; Taylor, 1998).
The stages of perspective transformation begin as a process of transformative learning. This process is viewed as a conscious and intentional one that begins with a dilemma and moves forward as distorted assumptions in meaning structures become transformed through critical reflection. The disorienting dilemma begins as a life event or an incident that a person experiences as a crisis that cannot be resolved by applying previous problem-solving strategies. As a result, the person engages in self-examination often accompanied by unpleasant or undesirable emotions that lead to a critical assessment of assumptions (Mezirow, 1991a, 1994). This situation can be uncomfortable. Generally, this leads the individual to consider and explore options for forming new roles, relationships, or actions followed by a plan of action. This plan consists of acquiring knowledge and skills, trying out new roles, renegotiating relationships, and building competence and self-confidence. Finally, the re-integration process is completed when the individual fully incorporates the new learning, that is, the attitudes, beliefs, and behaviors into her or his life that develop into a new transformed perspective (Mezirow, 2000).

King (2009) contends that as adults consider and learn new information, they determine how to make it fit into their existing belief and value structures. If the information readily fits into past patterns, they continue with an understanding of the information, but without much further disruption in their beliefs, values, and assumptions. However, if the information does not readily fit, they may begin to question their values, beliefs, and assumptions to determine what is out of place. Thus, manifesting to a process where the adult learner begins to question the process of how to balance the “truth” with the conflicting information gathered or stored versus the new
beliefs and values. Mezirow (2000) concluded that most of the time the new information wins in this test and a new way of understanding a new perspective takes root in the adult learner. Mezirow (2000) clarified that transformational learning is learning through action, and the beginning of the action learning process is deciding to allow a different meaning perspective.

Mezirow (2000) explained that in perspective transformation, the adult learner tends to interpret experiences critically, examine the assumptions and beliefs that have structured how those experiences have been interpreted, and revise personal assumptions until the structure of previous assumptions has been transformed. According to Mezirow (2000), two elements of transformative learning are critical reflection and critical self-reflection. The adult learner gets the chance to validate the best judgment. With critical reflection, the adult learner rationalized a new point of view without dealing with the deep feelings that accompanied the original meaning perspective. King (1997b) concluded in her mixed-method study that adult learners’ experience facilitated transformative learning, as did the occurrence of other life changes such as immigration, emotional issues, and changing jobs and/or residence.

King (2005) concluded in research conducted about learning activities that facilitate perspective transformation among adult learners that the journey to transformative learning is not usually strictly linear; it may have many twists, turns, stops, delays, and even re-routing along the way. With the current dynamics of global affairs in the world, adult learners who will succeed in their studies and life’s work need life-long skills to help them cope with the rapid and incessant changes in technological skills, greater performance expectations and changing responsibilities. Adult learners
may experience dramatic changes in their professional perspectives when they progress through foundational courses for their future or current profession (King, 1998). Alternatively, King (2000) contends that transformative learning could occur through phases of (a) Fear and Uncertainty, (b) Testing and Exploring, (c) Affirming and Connecting, and (d) New Perspectives. These phases are consistent with the fundamental understanding of the needs of adult learners (Lawler & King, 2000).

King (2005) states that

in the course of our daily lives, we as adults are constantly engaged in lifelong learning. Today more than ever it seems that the pressure is upon us to grasp new information instantly, process it’s meaning, and make decisions. (p. 8)

Transformation is a cognitive rational process and understood as a uniquely adult form of metacognitive reasoning. Reasoning is the process of advancing and assessing reasons, especially in those that provide arguments supporting beliefs resulting in decisions to act. Beliefs are justified when they are based on good reasons (Mezirow, 2003). There are situations where adult learners do not have to go through the above experiences for transformative learning (Mezirow, 1978, 1991b). This calls for arguments put forward by scholars on transformative learning such as Cranton (1994), King (1997), O’Sullivan (2002), and Tisdell (2000, 2003) who have argued that factors such as culture, immigration, social, spirituality, and financial challenges of adult learners contribute to transformational learning. Tisdell (2008) criticized Mezirow for a lack of attention to the components of the unconscious and spirituality as factors that will foster transformative learning. Tisdell (2000) and O’Sullivan (2002) contend that spirituality in the context of transformative learning is the aspiring social justice and interconnectedness, and having a relationship to a higher power. O’Sullivan (2002)
affirmed that transformative learning is an individual process. He criticized Mezirow’s work as a theory of individual rather than social transformation that is influenced by the role of rationality and critical reflection in challenging beliefs.

According to Taylor (2000), the 21st century deals with pressing issues that challenge social transformation of power relations based on race, gender, social status, and culture. O’Sullivan (1999) stated that contemporary education suffers deeply by its eclipse of the spiritual dimension of our world and universe. The field of adult and higher education gives little known attention to how adults construct knowledge through unconscious and symbolic processes in general, including cultures (Tisdell, 2002, 2003). It is reasonable to recognize that transformative learning transcends the mind and spirit beyond the pragmatics of everyday life:

Such a shift involves our understanding of ourselves and our self-locations; our relationships with other humans and with the natural world; our understanding of relations of power interlocking structures of class, race and gender; our body-awareness, our visions of alternative approaches to living; and our sense of possibilities for social justice and peace and personal joy. (O’Sullivan, 2002, p. 274)

Again, Taylor (2007) agrees with the above statement by stating that:

The role of culture and/or difference and transformative learning continues to be poorly understood . . . There are a large number of studies conducted outside the United States that did not attempt to explore differences of nationality that might exist in relationship to transformative learning. (p. 178)

Preece (2004) argued that transformational learning is a complex process but one that is contextualized in the individual’s interpretation and meaning making of the environment and culture. Transformational learning occurs when the adult learners are able to develop self or inner awareness from previous knowledge and question assumptions or reality of an issue. Merriam and Ntseane (2008) conducted a study on
transformative learning of adult learners in Southern Africa and concluded that transformative learning among international adult learners in Africa is often about recognizing an inner voice, intuitive guide or self-examination. Clark and Wilson (1991) concluded that in transformational learning, meaning is context dependent. It is shaped by language and culture. According to Taylor (2007), minimal research has explored the relationship of transformative learning and cultural differences such as gender and age of international adult learners. This study examined factors that promote transformative learning experiences of international graduate-level learners by adopting Mezirow’s (1978) transformative learning theory.

**International Adult Learners**

The Institute of International Education’s (2010) *Open Door Report* states that active engagement between U.S. and international students in American classrooms provides students with valuable skills that will enable them to collaborate across cultures and borders to address shared global challenges in the years ahead. China is currently the leading place of origin for international students in the United States followed by India and South Korea (Institute of International Education, 2010). In 2008/2009, India was the leading place of origin for international students who come to the U.S., followed by China, South Korea, Japan, Canada, and Taiwan.

Over half of all international students in the United States are Asian students (57%), followed by students from Europe (13%), Latin America (12%), Africa (6%), the Middle East (6%), North America including Canada (5%), and Oceania/Australian (1%). In regards to their fields of study, the 2009/2010 report indicates that Business and Management (21%), Engineering (18%), Physical and Life Sciences (9%), Mathematics
and Computer Science (9%), Social Sciences (9%), Fine & Applied Arts (5%), Health Professions (5%), Intensive English Language (4%), Education (3%), Humanities (3%), and Agriculture (2%). This shows that international students represent a significant population of college students in the United States. The majority of the international students (62%) fund their studies through family and personal sources and almost 70% of all international students’ primary funding comes from sources outside of the United States (Institute of International Education, 2010).

Adult education is an organized effort to assist learners who are old enough to be held responsible for their acts to acquire or enhance understandings, skills, and dispositions (Mezirow, 2000). According to Siegel (1997), liberated people are free from unwarranted and undesirable beliefs, unsupportable attitudes, and paucity of ability that can prevent one from taking charge. Through adult education, adult learners develop the requisite learning processes to think and choose reliable foresight in order to become autonomous thinkers (Mezirow & Associates, 2000). Learning that reflects on itself can only be accomplished through transformational education, “a ‘leading out’ from an established habit of mind,” an order of mental complexity that enables self-direction, a qualitative change in how one knows (Kegan, 1994, p. 232).

According to Basseches (1984), the broader purpose and goal of adult education is to help adults realize their potential for becoming more liberated, socially responsible, and autonomous learners, that is, to make more informed choices by becoming more critically reflective as “dialogic thinkers.” Over the years, adult education has developed through specific modes such as home education, university extension, continuing education, workforce training, literacy, free lectures, Adult Basic Education, General
Educational Development programs, and non-formal and formal education (Wilson & Hayes, 2000). A formidable definition for adult education is, “... the growing educational activities of adults” (Stubblefield & Rachel, 1992, p. 10). This definition connotes that adult education is both continual and growing. According to Robinson (1995), the adult learner enters the learning environment for personal growth and development, personal and social improvement, cultivation of the intellect, and social transformation. The learning experience is not in isolation but rather takes place within the framework of societal and educational culture (Mezirow, 1994, 1996). Adult learners have a rich background of knowledge and experience that tend to help them learn best when this experience is acknowledged and new information builds on their past knowledge and experience (Caffarella, 1994; Knowles, 1990).

According to the Institute of International Education (2010), an international student is defined as anyone studying at an institution of higher education in the United States on a temporary visa that allows for academic coursework. These include primarily holders of F1 (student) visas and J1 (exchange visitor) visas. International learners are adult learners who are not U.S. citizens or permanent residents of the United States and are usually required to have an F1 or J1 visa to study in the United States. International students as adult learners pass through the phases of equilibrium, disequilibrium, and re-equilibrium. They are adult learners in transition with the goals of pursuing higher education and professional training in the United States. They envision having more opportunities, advancing their careers, and improving their social mobility. International adult learners have multiple and complex roles as learners with major language and cultural backgrounds (Erichsen, 2009).
According to Dewey (1938/1963), experience is created by interactions between external conditions and an individual's "personal needs, desires, purposes, and capacities" (p. 42). Knowles’s conception of andragogy (1980) agreed that experience has a prominent role to play in the adult learners academic journey. The main assumption of andragogy is that adult learners bring a store of life experiences to the learning encounter and experience can serve as a resource for learning. International adult learners are no exception to this assumption, as they bring to the learning situation a wealth of information and learning experience. Development, therefore, takes place in a social context of environmental prompts as people act on the world and in turn acts on them (Dewey, 1938/1963). Mezirow (1996) argues that learning is understood as the process of using a prior interpretation to construe a new or revised interpretation of the meaning of one's experience in order to guide future action. “Education leads to change in the amount of knowledge people have, changes in skills and competencies, changes in the way we communicate and understand each other, changes in our senses of self, and changes in our social world” (Cranton, 1994, p. 160). Adults who come to understand their role and responsibility in constructing knowledge are likely to become more effective members of a pluralistic, changing society, and these changes are a form of cognitive-objectives of higher education (Marienau & Taylor, 1997).

Like all adults, international adult learners have a rich background of knowledge and experience. They tend to learn best when this experience is acknowledged and when new information builds on their past knowledge and experience. They come to the learning situation with their own personal goals, which may or may not be the same as those that underlie the learning situation. They learn best as independent, self-reliant, and
connected in collaborative ways and their learning needs are diverse (Caffarella, 1994). International adult learners in their quest to seek advance degrees in the United States have the desire to accomplish advanced professional skills and degrees that makes them competitive globally. These goals are in accordance with Knowles’s (1990) and Merriam and Caffarella’s (1999) concept that adult learners are goal-oriented.

King (2003) conducted a study of exploring feminist research and pedagogy in the shadow of tragedy about how international adult learners construct a response in lifelong learning. Participants in the study were from Belize, Ghana, Sri Lanka and Dominican Republic. All the participants agreed that others are different from themselves when they learned to accommodate the strengths in building shared communities. King (2003) concluded that many of the adult learners experienced transformative learning as a result of shifts in emotions and perceptions from shock, fear, and intense grief that emanated from the tragedy of September 11, 2001.

Zeszotarski (2003) conducted mixed-methods research to examine international students’ goals, expectations, and experiences of studying in the United States. Eleven international learners from Santa Monica College were selected for the study. Results of the survey indicated that language skills, previous international experience, demographics, and social networks played a major leading role in the expectations of the international adult learner. Twenty students were also selected from the survey for an in-depth interview to provide details of their expectations and global expectations. The findings showed that international adult learners expected to benefit from a student-centered and humanistic form of education in the United States. Zeszotarski’s (2003) investigation concluded that international adult learners noticed the advantages they
expected to gain from getting a degree at an institution within the United States. Limitations of the study included a small sample size to augment generalizations that did not take into consideration factors that promote transformative learning of international adult learners experiences or how they transform from one stage to another in their quest to achieve their expectations and goals. The majority of the existing research on transformative learning of international adult learners did not attempt to explore differences of nationality that exist in relationship to transformative learning (Taylor, 2007). This study addressed the gaps of knowledge by investigating factors that promote transformative learning of international adult learners in relation to their colleges and demographic characteristics.

Factors that Promote Transformative Learning

King (2005), in the development of the Learning Activities Survey instrument, concluded that there are practical strategies for promoting transformative learning when presented with an emphasis on being critically reflective. These included case studies, collaborative learning, collaborative writing, critical incidents, discussions, interviews, student presentations, journals, and research papers.

Brookfield (2000) also suggests that autobiographies, critical incidents, and collaborative problem solving are some of the factors to facilitate transformative learning. Cranton (2002), in her book Understanding Transformative Learning, listed “seven facets of transformative learning” as guidelines on how to promote transformative learning to include (a) an activating event that typically exposes a discrepancy between a person’s self-reflection (questioning and examining assumptions in terms of where they originated, the consequences of holding them) and why they are important; (b)
articulating assumptions, that is, recognizing underlying assumptions that have been uncritically assimilated and are largely unconscious; (c) being open to alternative viewpoints; (d) engaging in discourse where evidence is weighed, arguments assessed, alternative perspectives explored, and knowledge constructed by consensus; (e) revising assumptions and perspectives to make them more open and better justified; and (f) acting on revisions, behaving, talking, and thinking in a way that is congruent with transformed assumptions or perspectives.

According to Pohland and Bova (2000), Macleod et al. (2003), Mallory (2003), Feinstein (2004), and King (2004), one of the best ways to promote transformative learning for adult learners is to providing them with learning experiences such as direct, personally engaging and stimulating reflections upon their experiences. Many factors are known to promote transformative learning experiences of adult learners including international adult learners in higher education (King, 1997; Taylor, 1998). These include critical thinking skills, personal self-reflection, classroom discussions and dialogues, and mentoring. International graduate-level learners will one way or the other experience transformative learning in association with their education and out of school related activities with the aid of the above factors indicated by Cranton (2002) and King (2005) as strategies that helps to promote transformative learning among adult learners.

**Critical thinking.** According to Brookfield (1987), critical thinking is the process of examining assumptions that underlie beliefs, values, and ways of understanding. Many researchers and writers (Brookfield, 1995; Cranton, 2006a) have discussed in detail how critical thinking skills could be used to empower the adult learner to be able to reflect and refine ideas, beliefs, assumptions, and values. Critical thinking is
the core of transformative learning and provides the majority of the strategies for facilitating transformative learning (Brookfield, 1987; Cranton, 1994; Dirkx, 1997; Pilling-Cormick, 1997).

King (2005) explained that international learners transform from inveterate silent members to class leaders through learning opportunities such as critical thinking, research paper presentations, and case studies. These help adult learners use their knowledge base to make informed decisions and reflect on their experiences. Cranton (2006a) has argued that educators can use critical thinking to empower learners by giving them challenging assignments in the classroom. The educator should encourage critical self-reflection and include the learner in the decision-making process in the classroom. This can be accomplished through the use of questions, experiential learning, critical reflections, journaling, and constructing conscious-raising experiences. These will serve as an impetus to enable students to challenge previously unexamined values, beliefs, and assumptions.

Critical thinking is self-directed, self-disciplined, self-monitored, and self-corrective thinking (Cranton, 2006a). Cranton (1994, 2000, 2006b) provided the following strategies as a means to help the adult learner do critical thinking. These strategies include the use of questioning, constructing conscious-raising experiences, experiential learning models in the classroom, critical incidents, and journaling. The strategies serve as a measure to make adult learners challenge previously unexamined values, beliefs, and assumptions. To support the above assertion, Brookfield (1995) explained that to foster critical thinking among adult learners, students are asked to recall
the best or worst experience, usually within a specific context, such as their worst teaching experience or their best interaction with a supervisor.

Brookfield (1995) contends that for the educator to stimulate critical thinking and support the adult learner in transformative learning, there is the need for educators to provide opportunity for students to question their assumptions, that is, to examine what they believe and how they feel and consider the consequences of getting new assumptions. According to King (1997b), it is through critical thinking that the adult learner finds the basis for examining assumptions and beliefs. There are several ways in which educators can use critical thinking skills in the classroom. As discussed earlier some of them are the use of journaling, critical incidents, and experiential learning. Based on these investigations, there are many questions left unanswered concerning how critical thinking skills promote transformative learning experiences of international graduate-level learners as related to colleges and demographic characteristics.

**Personal self-reflection.** Mezirow (2000) explained that personal self-reflection is the ability of the adult learner to question the integrity of assumptions and beliefs based on previous experience. It results from a response to an awareness of conflicting thoughts, feelings, and actions and can lead to perspective transformation. According to Brookfield (2000), critical reflection is central to transformational learning and involves the fundamental questioning and reordering of how one thinks or acts. Brookfield (2000) also defines personal self-reflection as some sort of power analysis involving hegemonic assumptions. Personal self-reflection is the art of questioning and examining assumptions in terms of where they came from, the consequences of holding onto them, and why they are important (Brookfield, 1995).
Kreber (2004) conducted a study about teachers and how they use personal self-reflection. Kreber’s (2004) research used Mezirow’s categories of content, process, and premise reflections to the three domains of teaching knowledge: instructional, pedagogical, and curricular. Kreber’s (2004) study concluded that premise reflection was the least common among the three domains of teaching knowledge and teachers would need to begin with this kind of reflection in order to be more meaningful, that is, to be more concerned with why they teach rather than what to teach.

Kreber (2004) explained that writing as an activity in the class also helped addressed the limitation of making sense of personal self-reflection. It challenges the adult learner to both recall from memory and verbally articulate reflective moments during the teaching practice and provides a means for both reflecting and recording previous thoughts that can be shared with others. Merriam (2004) explained that learning to be critically reflective is seen as dependent on mature cognitive development.

A longitudinal study conducted by Liimatainen, Poskiparta, Karhila, and Sjogren (2001) investigated the development of reflective learning and concluded that there are differences among nursing students in reaching critical consciousness during their education program. According to the study, some students evolved to become “critical reflectors,” where the schemas indicated that communicative and transformative learning were the features of empowerment.

Several researchers (Boyer, Maher, & Kirkman; 2006; Chimera, 2006; Kichenham, 2006; Ziegler, Paulus, & Woodside, 2006) contend that personal self-reflection can be promoted among adult learners when educators rely on instructional aids such as writing online and in reflective journals. According to Burke (2006), writing
in an intensive format also strengthens the reflective experience with creation of artifacts in the mind. It requires learners to externalize their reflective experience, taking discussion away from the affective or psychological domains and forces some form of reconciliation with the material, resulting in an inherently perspective activity.

Mezirow (2000) asserted that in order for an adult to learn freely and fully, there must be critical-dialectical discourse that involves two distinctive adult capabilities. The first is what Kegan (2000) identified as the development of the adult’s ability to become critically self-reflective. The other is what King and Kitchener (1994) termed as reflective judgment, that is, the capacity to engage in critical-dialectical discourse involving the assessment of assumptions and expectations supporting beliefs, values, and feelings. Personal self-reflection requires understanding the nature of reasons and their methods, logic, and justification (Mezirow, 2000). The literature on personal self-reflection as a factor to promote transformative learning experiences of international graduate-level learners is minimal. The aforementioned statement on personal self-reflection was addressed in this research.

**Classroom discussions and dialogues.** According to Brookfield (1986), there is a need for educators to create conducive physical environment and an all-inclusive classroom that can reduce attitude of fear that many international students bring to the educational experience. The classroom-learning environment should be supportive to help one’s values and assumptions. This will encourage the adult learner to use critical thinking skills to question assumptions and authority in order to enhance the relationship between teacher and student.
Saavedra (1995) conducted a research study that was focused on the learning process of a teacher’s group devoted to improving their instructional techniques. Saavedra (1995) concluded that placing teachers at the center of their own learning in a critically reflective and social group setting contributed to transformation. This could be achieved through collaborative group work, problem-based learning, online courses, and project-based learning. King (1997a, 2000) explained that class discussions provide an enabling environment for adult learners in higher education to experience perspective transformation as they get the opportunities to share ideas based on their individual background experiences. Thus, this leads them to reflect and compare new information with the previously held knowledge.

According to King (2005), dialogue is another critical component of creating transformative learning opportunities among adult learners in higher education. Mezirow (1997a) explained that in the course of the adult learner’s journey to seek values and assumptions, they begin to examine those habits of mind as they engage in discourse with one another. Brookfield and Preskill (2005) point out that there should be dynamic critical discussion in order to incorporate probing meaning, questioning assumptions, and supporting learners all at the same time. Mezirow (1997) opines that dialogue results in transformative learning as it manifests in adults to question the comprehensibility, truth, and appropriateness of what is being asserted.

Mezirow (2003) asserts that dialogue is a discourse involving the assessment of beliefs, feelings, and values. It is also the medium for critical reflection to be put into action by which the learner’s experience is reflected on assumptions and beliefs. Carter
(2002) concluded in a study that the use of dialogue in the classroom stresses much on relational and trustful communication, highly personal, and self-disclosing.

King (2005) conducted a study using the Transformative Learning Opportunities Model to assess the needs of adult learners and concluded that the use of dialogue allows the adult learners to branch out in their own directions of learning and begin to see a very different perspective of their experiences. According to Mezirow and Associates (2000), an ideal condition to promote transformative learning using reflective dialogue must be the most accurate and complete information to ensure freedom from coercion and distorting self-deception and encourage openness to alternative points of view. Transformative learning can also be fostered when the adult learner demonstrates care and concern about how others think and feel, develop the skills and the ability to weigh evidence, and assess arguments objectively.

Cranton (2006a) disclosed that discourse in the form of dialogue is central to the transformative process. Educators need to engage in conversation with others in order to better consider alternative perspectives and to determine their validity. Freire (1970) proposed six attitudes that educators need to demonstrated to achieve a meaningful and authentic dialogue (a) love for the world and human beings, (b) humility, (c) faith in people and their power to create and recreate, (d) trust, (e) hope that the dialogue will lead to meaning, and (f) critical thinking and the continuing transformation of reality. Cranton (2006b) outlines the following criteria to be used in an adult learning setting when the educator wants to engage in dialogue (a) find provocative ways to stimulate dialogue from different perspectives, controversial statements, readings from contradictory points of view, or structured group activities that lead people to see
alternatives; (b) develop discourse procedures within the group where group members can be encouraged to take on the roles of checking and controlling the direction of the discourse, ensuring equal participation, and watching out for coercion and persuasion; (c) avoid making dismissive statements or definitive summaries, the educator must be careful not to shape the discussion through implicit regulatory functions; and (d) encourage quiet time for reflection within any exchange. Extensive review indicates that gaps of knowledge exist on how classroom discussions and dialogues can promote transformative learning among international graduate-level learners. The above-mentioned statement on classroom discussion and dialogues was addressed in this research study.

**Mentoring.** According to Bloom (1995) and Daloz (1987), mentoring is the means of providing psychological, emotional, and technical assistance to the learner when needed. Daloz (1987) explained that mentoring makes room for the learner or mentee to create new ways of asking questions about the learning process and the environment. Mentoring also helps adult learners deal with human relations that help them eventually in their learning transformations.

Daloz (1999) lists criteria of support for students to include (a) listening (actively engaging with the student’s world and attempting to experience it from the inside); (b) providing structure (close personal attention, clear expectations, specific assignments, short and achievable tasks, and predigested materials . . . are important); (c) expressing positive expectations (having positive expectations of students is one of the most important aspects of effective advising); (d) serving as advocate (mentors are often seen as powerful allies on the journey; they intercede with the powers, translate arcane runes, and protect the pilgrim from assault); (e) sharing ourselves (as things progress . . . the
pressure increases for the teacher to reveal himself as a human, not god); and (f) making it special (pp. 209-229). The student feels uniquely seen by the mentor and the effect can be a potent tonic.

Daloz (1999) concluded in a study that to promote mentoring, educators have to create a non-judgmental attitude and a cultural friendly classroom environment. Again, support could be a form of providing close personal attention, clear expectations, specific assignments, and technological support. According to Daloz (1999), faculty mentoring is an important step in helping students in their perspective transformative learning. This is a powerful instrument on the journey to transformation (Daloz, 1999). In contrast to Daloz’s (1987) assertion that mentoring plays a significant role in the adult learner’s changing perspective, Brookfield (1986) explained that mentoring could best take place in a facilitated group interaction. In adult education, such groups are a major medium for perspective transformation.

According to Brookfield (1986), the mentor must provide safety, trust, respect, and codes of conduct to encourage support and transformative learning. Vogelsang (1993) investigated educational activities that will promote transformative learning in higher education. Twenty women in their senior year of an undergraduate degree program in college were interviewed about the type of educational activities that helped them reflect and experience transformational learning.

Vogelsang (1993) concluded that some of the adult learners experienced a revision of meaning schemes, while others experienced a revision of meaning perspectives (perspective transformation). Vogelsang (1993) explained that the differences resulted from the types of reflection students experienced. Data from the
study revealed that some students had to reflect on context, process, and premise reflections. Vogelsang’s (1993) research described how educational activities promote adult learners’ perspective transformation experiences in higher education through qualitative study. However, the study was limited by the moderate sample size and therefore it was difficult to make generalizations. The study also lacked basic descriptive statistics about the participants’ demographic origins. These gaps of research were addressed in this study by using mixed methods design (quantitative and qualitative) to test the relationships between demographic characteristics, colleges, and factors that promote transformative learning experiences of international graduate-level learners.

**Learning Activities Survey**

King (1997), in consultation with transformative learning scholars, developed a survey instrument titled the *Learning Activities Survey* to gather data related to the transformative learning experiences among adult learners in higher education. The survey instrument was based on Mezirow’s (1978, 1990), Cranton’s (1994), and Brookfield’s (1986, 1987, 1995) work which put emphasis on the activities and methods that can be used to facilitate transformational learning through reflective thinking, critical thinking, and the development of the person’s consciousness. The *Learning Activities Survey* was designed to identify perspective transformation of adult learners in relation to their educational experiences and determine what learning activities promote perspective transformation of adult learners.

The instrument is divided into four sections. The first section provides a description of the stages of perspective transformation where respondents are asked to check all information about their educational experiences that makes them reflect on past
experience. The second section requires respondents to give information on learning experiences that facilitate perspective transformation. The third section asks respondents to provide information on which learning activities enhance perspective transformation. The final section of the instrument asks respondents to provide information about the demographic characteristics such as age, marital status, educational level, degree program, race, ethnicity, and gender.

Question one of the instrument is based on Mezirow’s original 10 stages of perspective transformation. Question two is based on how respondents reflect on their values, beliefs, opinions or expectations. Question three asks respondents to briefly describe the change of experience. For example, “briefly describe what happened.” This is to verify if the respondent’s educational background had a role to play in assessing perspective transformation. Question four seeks information on what classroom learning activities and events will lead to facilitate perspective transformation. Questions three and five encourage respondents to give free responses, and question six has closed-ended questions that ask respondents to reflect on past behavior or events that might have caused a change in their life. Question seven asks respondents about specific learning activities in the classroom that can facilitate perspective transformation experience. The last six questions, 8 to 14 of the instrument, include the demographic characteristics such as age, gender, college major, number of semesters in school, marital status, and race and ethnicity of participants.

The instrument has a follow-up interview section consisting of eight questions. Respondents are encouraged to provide detailed and in-depth answers to questions in the follow-up interview questions. Follow-up interview questions help to confirm and
expand on the results of the quantitative part. This scale “PT-Index” (Perspective Transformation Index) helps determine how adult learners experience perspective transformation in relation to their educational background. The score for each participant is on a scale of one to three and scored as follows: If participants experienced perspective transformation in the course of their education, they are assigned a score of “3.” Participants receive a score of “2” if they experience perspective transformation but not in connection with their education at the institution. Finally, participants are scored “1” if they did not experience any form of perspective transformation.

**Reliability of the Learning Activities Survey.** Questions in the PT-Index of the instrument were used to check the consistency of the results and also evaluated responses to several items in the instrument. The instrument has been modified and reviewed several times recently and has been used in several different studies. The studies are as follows: (a) Higher Education Learning Activities Survey format—(1997-1998), (b) English Learners of Second Language—(King, 2000), (c) General Educational Development Learning Activities Survey—(King, 2003), (d) Adult Basic Education Learning Activities Survey—(King & Wright, 2003), (e) Face to Face Teachers Learning Technology Learning Activities Survey—(King, 2002), (f) Higher Education Faculty Learning Technology Learning Activities Survey—(King, 2003), and (g) Teachers in Science Education Classes Learning Activities Survey—(King & Kerekes, 2008).

**Validity of the Learning Activities Survey.** A pilot study was conducted to help validate the instrument through the use of critical incidents interviews from adult learners. Panel of experts on transformational learning reviewed, critiqued, and made
suggestions to the instrument as suggested by Gall, Borg, and Gall (2007). This helped in the construction of the content and format of the instrument.

The *Learning Activities Survey* instrument has been evaluated through many methods to ensure that it purports to collect data on participants’ transformation in education. King (1997a) addressed the issue of content and constructs validity by using an array of methods of inputs and evaluation of the instrument including conducting series of pilot studies and suggestions by a panel of experts. King (1997a) conducted numerous surveys to determine if transformative learning is possible with adult learners in various educational settings. Triangulation and member checking of results from the pilot study helped in the formulation of the instrument. This was conducted to produce the best practice approach to instrument development and validation in unusual contexts (Tashakkori & Teddlie, 2003). The items in the questions were correlated in pair-wise to depict consistent characterization of responses.

According to King (1997a), another validity process was that the *Learning Activities Survey* and follow-up interviews were matched to ensure that respondents may identify themselves by name to validate instrument in certain instances but respondents were assigned anonymous names to enhance full disclosure and active participation as the instrument was put to use. Finally, follow-up interviews were used to validate data from the quantitative phase since follow-up interviews was conducted after tabulation and analysis of the data.

**Research Studies Using Learning Activities Survey**

Taylor (2000) conducted an analysis of more than 46 transformative learning research studies and recommended that there should be more quantitative research on
transformative learning with the purpose to determine (a) the ability to utilize research
designs, (b) conducting in-depth theoretical component analysis, and (c) seeking to
understand what acting on a new perspective looks like. Since then, few quantitative
studies have been conducted on transformative learning in higher education such as:
*Examining Learning Activities and Transformational Learning* by King (1997a, 2000),
*Perspective Transformation in Adult ESL Learners Using Internet Technology* by LaCava
(2002), *Research on Transformative Teacher Education: A Meaningful Degree of
Understanding* by Glisczinski (2005), *Reported Transformational Learning Experiences
of Undergraduates in Business School* by Brock (2007), and *Transformative Learning in
Online Courses* by Wansick (2007). These research studies used quantitative and
qualitative research methods in their analysis and their conclusions provide information
for further studies using quantitative evaluations. According to Taylor (2008), there is
lack of quantitative evaluation on activities and conditions that facilitate transformational
learning among adult learners in higher education.

There have been some qualitative research studies conducted on transformative
learning but the authors draw their experience as educators in the field of teaching in
higher education. However, little data exists on factors that promote transformative
learning experiences of international graduate-level learners. For instance, Cranton
(2000) has written extensively on how adult learners experience transformative learning
in the classroom. Tisdell (2000, 2008) also shared more on the role of spirituality in
perspective transformational learning. She describes in detail how spirituality as a
component of transformative learning play a role in helping adult learner’s experience
personal transformation beside other factors that facilitate it. Taylor (2000) contends that
the predominant approach to research on transformative learning among adult learners has concentrated more on qualitative than quantitative designs.

According to Taylor (2007), it is clear that much remains unknown about the practice of fostering transformative learning using quantitative research methods. It often requires intentional action, personal risk, a genuine concern for the learners’ betterment, and the ability to draw on a variety of methods and techniques to help create a classroom environment that supports personal growth and social change. According to King (1997a), the majority of studies on transformative learning has been that of qualitative research design which has provided valuable information about perspective transformation experience in the areas of transformational journey that elaborate less on the methods used. However, a few positivist research studies conducted on transformative learning did not address factors that facilitate transformative learning among international graduate-level learners in the United States. A positivist approach to transformative learning with an international dimension to assess what facilitates it will enhance knowledge on transformational learning. Research studies conducted by Fullerton (2010), Glisczinski (2005), Harrison (2008), King (1997a, 2000), LaCava (2002), Ritz (2006), Brock (2007), and Wansick (2007) have shown that there is evidence to conduct research on transformative learning using quantitative research methods or a combination of the two (mixed-methods).

King (1997a) conducted a study to examine activities that promote perspective transformation among adult learners in higher education. The study involved over 700 participants in three large metropolitan universities. King (1997a) developed an instrument entitled the Learning Activities Survey, which consisted of a questionnaire
with objectives and free-response items. The survey instrument used the tenets of Mezirow’s 10 stages of perspective transformation. The purpose of the study was to develop and administer an instrument to test specific learning activities that are recognized as promoting perspective transformation among adult learners in higher education. King’s (1997a) research used statistical analysis of normal distribution, percentages, frequencies, Pearson Product Moment Correlation (PPMC) analysis, Spearman Rank Correlation Coefficient, and a follow-up interview.

King’s (1997a) study concluded that 37.3% of the adult learners in the sampled population experienced perspective transformation in the context of their educational background. Critical thinking skills activities, class discussions, and the teacher’s role in the classroom were indicated to be more than 25% of the time to contribute to perspective transformation. These findings were in support of the activities reviewed in the literature. King’s study provided credible information for this study’s use of the Learning Activities Survey.

King’s (1997a) research concluded that there is the need to conduct more quantitative research on learning activities that promote transformative learning of adult learners in higher education. However, the study did not address the population of international graduate-level learners as related to their demographic origins and colleges. This study tested factors that promote transformative learning experiences of international graduate-level learners as related to demographic origins, and colleges.

King (2000) conducted a study on what facilitates perspective transformation in the classroom for adult English as Second Language (ESL) learners. The purpose of the study was to examine what learning activities foster perspective transformation among
(ESL) adult learners. King’s (2000) study conducted a survey for 208 participants and interviewed 24 adult learners who had been identified as having perspective transformation using multiple data collection techniques.

A modified format of the Learning Activities Survey instrument was used for data collection and analysis (King, 2000). Research concluded that adult ESL learners experience perspective transformation in their frame of reference, prior thinking about cultures, and language learning. Learning activities such as critical thinking, discussions, role-plays, and experiential learning also had a role in promoting perspective transformation among ESL adult learners. King’s (2000) research investigation has provided new ways to examine the experience of acculturation and language acquisition in transformative learning of ESL adult learners. It provided information on ESL adult learners and their relationships to transformative learning as well their ability to connect new knowledge into their unexamined beliefs, values, and assumptions.

King’s (2000) research outlined guidelines for further research on how perspective transformation can be applied to ESL learners in the classroom and methods of teaching ESL adult learners based on their past transformative learning experiences. The format of the survey instrument and follow-up interview was consulted in the formation of the instrument for this research. Limitation of the study included a sample size too limited to make generalizations for all adult ESL learners. Although, the study covered the demographic characteristics of all participants, it lacked an analysis of factors that promote transformative learning experiences of international adult learners as related to demographic characteristics and colleges. The limited focus of the research provides an opportunity for this study to include variables missing in the study.
LaCava’s (2002) doctoral thesis provided an extensive study on perspective transformation as it relates to the use of technology by adult ESL learners. The purpose of the study was to examine the role of Internet technology in relation to English as a second language acquisition and to investigate the extent adult ESL learners experience perspective transformation as a result of this activity.

The *Learning Activity Survey*—ESL/Technology format was used to analyze self-report data from four groups of non-native English speaking adults enrolled in college in Connecticut. There were 56 student participants (37 females and 19 males). Seven participants experienced perspective transformation based on the results from the quantitative phase of the instrument and were selected through stratified random sampling for follow-up interviews. Results indicated that 94.6% of adults practicing Internet technology in their education experienced perspective transformation. The Pearson chi-square nonparametric test of significance was used to analyze the quantitative data such as the PT-Index frequency counts. A constant comparison method was used to analyze the quantitative data from the survey responses and structured interviews. A causal-comparative method was used to determine possible effect of Internet technology practice on the adult ESL participants who reported perspective transformation experiences.

Research findings concluded that there were no relationships of perspective transformation experiences and demographic variables. Again, class discussion emerged as the leading activity that facilitated perspective transformations among adult ESL learners. Other activities that fostered perspective transformation from the data were influential people, life changes, and Internet technology. English language learning,
cultural changes, personal changes, and exposure to Internet technology emerged from the study as factors that facilitate perspective transformations of adult ESL learners. It added knowledge on transformative learning theory with the use of quantitative and qualitative measures. Limitations of the study included a small sample size, which made generalizations to other populations not valid to international graduate-level learners. Data from the study were specific to only ESL adult learners in technology class.

Glisczinski’s (2005) doctoral research provided opportunities for further research on transformative learning among adult learners in higher education. Glisczinski’s (2005) research studied 153 pre-service teachers in three different colleges. The purpose of the study was to assess the extent to which teacher education students were experiencing perspective transformation in northeastern Minnesota. Glisczinski’s (2005) study concluded that triangulation of quantitative and qualitative methods found that 33% of participants reported experiencing transformative learning as a result of coursework, interaction with peers outside of the classroom, and cross-cultural field experience.

Glisczinski’s (2005) study used a mixed-methods approach using a modified format of the Learning Activities Survey instrument developed by King (1997a), which was based on transformative learning theory of Mezirow (2000), Brookfield (2000), and Boyd (1991). The instrument was modified with triangulations to reestablish validity and reliability. Glisczinski’s (2005) study provided information on how pre-service teachers experience perspective transformation in higher education. Limitations of the study included a small sample size of participants, limited demographic variables, and analysis of results did not include correlations of factors that facilitate perspective transformation of international adult learners as related to demographic variables and colleges.
Ritz’s (2006) research used qualitative multiple-case study in an American institution of higher education. Twelve participants were selected from a total sample population of 525 full-time international graduate-level learners of business management or hospitality program. Demographic characteristics of participants included age, country of origin, and cultural background. The purpose of the study was to understand how international adult learners make meaning of new experiences in an American university.

Ritz’s (2006) primary data were gathered through interviews, observations, and field notes. This qualitative study highlighted what international adult learners experienced in the classroom. Ritz’s (2006) research concluded that there are numerous opportunities to promote participants’ cultural meaning making expansion by having international students share their own cultural experiences and promotion by instructors to question sociolinguistic and epistemic meaning perspectives-personal reflection.

Ritz’s (2006) research provided the following information for this study. First, the study was based on international adult learners and how they experienced transformative learning in higher education. Second, collection and analysis of data were based on in-depth structured interviews. Third, Ritz’s (2006) research provided valuable information on how cultural backgrounds of international adult learners are correlated to their perspective transformative learning. Although the study did not use the Learning Activities Survey instrument, it provided information on how international adult learners in higher education experienced perspective transformative learning in relation to learning activities at school and outside of school, and what learning activities helped them reflect on their meaning making. Limitations of Ritz’s (2006) investigation were minimal quantitative data analysis on international graduate-level learners with diverse
backgrounds relating to factors that foster meaning making. The research also consisted of a sample size too limited from which to make generalizations for a larger population. In addition, findings were also based on only qualitative data.

Brock’s (2007) doctoral research investigated on reported transformational learning experiences of undergraduates in business school. The purpose of the study was to identify which, if any, learning and support activities contributed to transformational learning in undergraduate business school and to determine if there is a difference between male and female students’ experience.

Brock’s (2007) research involved 256 undergraduate business students in a large northeastern university in a major metropolitan area. The Learning Activities Survey in a web-based survey format was used to collect and analyze data. The instrument covered 10 steps leading to transformational learning, reporting of transformational learning, demographic characteristics, and learning experiences encountered through personal interactions, class assignments, and life events. Methods of the study included one and two-tailed chi-square tests, t tests, partial correlations, and a logistic regression. Survey and correlation data were used to describe students’ experiences and was used as a measure to validate the instrument. Results from the study indicated that class maturity and classroom assignments contributed to transformational learning experiences.

Brock’s (2007) research provided the following information. First, it served as a guide on how to use quantitative methods to analyze data for transformative learning experiences of adult learners in higher education. Second, a pilot study was conducted as a measure to check the reliability and validity of the instrument. Data screening was conducted to correlate frequencies and percentages of demographic characteristics of all
respondents. This served as a precautionary step for this study. However, research was limited to only undergraduate students in a business program, which made it difficult to generalize the results to undergraduate students in other degree programs.

Wansick (2007) conducted a doctoral research study to explore evidence of transformative learning in an online master’s program at a major research university. Mezirow’s transformative learning theory was used as the theoretical perspective in the study. The purpose of the study was to examine student response to an online survey in order to generalize perceptions from a sample population and determine if transformative learning was occurring.

Wansick’s (2007) research used a modified format of the Learning Activities Survey originally designed by King (1997a) and correlated it with Mezirow’s 10 tenets of transformative learning to gather data for the quantitative information in order to discover evidence for transformative learning. Wansick’s (2007) study concluded that students in the online Masters of Liberal Arts studies program showed evidence of transformative learning, thus the online program was working to transform the adult learner by methods such as critical reflection, discussions, and critical thinking for students to reexamine their understanding of the world.

Wansick’s (2007) research provided valuable information on how quantitative methods can be used to gather information on transformative learning of adult learners. It explained the processes of using online methods to foster transformative learning in higher education. Limitations of the study included lack of extensive qualitative interviews to gather detailed information about how adult learners’ experience transformative learning based on online learning in higher education. The limited sample
size also made it difficult to make generalizations to graduate students in higher education, because the study focused on only students from the United States and did not include international adult learners.

Harrison’s (2008) doctoral research used multiple case studies that focused on the lives and experiences of four women who participated in an adult literacy program. The purpose of the study was to investigate the extent to which participation in a literacy program affected the lives of its participants and how the change was manifested. Participants related experiences to the tenets of Mezirow’s transformative learning theory to include an exploration of new roles, actions, self-confidence in new roles, development of a plan of action, and reintegration into life based on their new frames of reference. Data for the study were gathered using reflective journals and interviews in a semi-structured format based on the follow-up interview questions from the Learning Activities Survey developed by King (1997b).

Harrison’s (2008) study used ethnography as an analytic tool that employed grounded theory, thus leading to the development of a new theory called metamorphosis. Harrison (2008) concluded that there is a deep structural shift as participants reflected on their personal consciousness. Harrison’s (2008) doctoral study provided information for further studies on transformative learning among international adult learners. However, Harrison’s research lacked a sample size large enough from which to make generalizations. Additionally, there were no quantitative data presented to correlate transformative experiences of adult learners in the context of their educational backgrounds, demographic characteristics, and colleges.
Fullerton’s (2010) doctoral research provided a beginning point for further research on transformative learning experiences of international adult learners in higher education. The purpose of the study was to explore how transformative learning was incorporated into the experiences of college students who are intentionally exposed to transformative learning strategies while engaged in a leadership development program (Fullerton, 2010).

Fullerton’s (2010) study used a mixed-methods approach with a Developmental Advising Inventory and Leadership Knowledge Survey instrument. Fullerton’s (2010) research concluded that age was a strong correlating factor for transformative learning to occur and transformative learning can and does occur independently. The study also used pre-and post-empirical assessments to serve as a pilot study and open-ended interview questions, but the small sample size of eleven college students posed a challenge for generalization. Fullerton’s (2010) study was limited to only adult learners in the United States colleges, thereby excluding international adult learners.

**Summary**

The literature has provided an explanation of the evolution and development of transformative learning theory. As adults mature, their life experience compels them to develop meaning schemes and meaning perspectives that are increasingly comprehensive and discriminating (Brookfield, 2010; Mezirow, 2000). International graduate-level learners as adult learners possess multiple learning experiences that allow them to have a wider frame of reference and meaning making of knowledge (Cranton, 2002; King, 1997a, 2000; Brock, 2007; Taylor, 2000, 2008).
Most data on transformative learning of international adult learners lacks uniformity, generally excludes quantitative methods, and omits an extensive mixed-methods investigation (Taylor, 1998). Research studies that used the *Learning Activities Survey* instrument on transformative learning consisted of sample sizes too limited to enhance to generalizability. Furthermore, these studies exhibited inconsistencies of research design, problems with reliability and validity of data collected, and greater concentrations on learners’ transformational journey as well as problems they encountered in transitioning from one stage to the other. Based on the above, there is evidence to indicate that few research studies have investigated factors that facilitate transformative learning among international graduate-level learners using quantitative methods (Glisczinski, 2007; LaCava, 2002; Brock, 2007; Taylor, 2008; Wansick, 2007).

The literature review traced the development of international adult learners, the universal meaning of adult education, characteristics of the international adult learners, reasons for choosing to study in the United States, and characteristics accompanying these learners’ environment. The literature described in detail the gaps and inconsistencies concerning the factors that promote transformative learning experiences of international graduate-level learners and the need for investigation of these factors using quantitative methods. It provided a description of the instrument as well as current studies that have used the *Learning Activities Survey*.

The literature explained how the instrument has provided information based on its adaptability to estimate frequencies, percentages, and correlations to determine transformative learning of the adult learner. Thus, this research investigation tested the
aforementioned factors that promote transformative learning experiences of international
graduate-level learners in relation to colleges and demographic origins.
Chapter 3

Methods

The purpose of this study was to examine factors that promote transformative learning experiences of international graduate-level learners. This chapter presents the research methods used in this study including the research design, research questions, population and sample, the Learning Activities Survey, demographic information, pilot study, data collection, data analysis, ethics, and summary.

Research Design

Extensive studies conducted by numerous researchers (Fullerton, 2010; Glisczinski, 2005; Harrison, 2008; King, 1997a, 2000; LaCava, 2002; Ritz, 2006; Brock, 2007; Wansick, 2007) confirmed that a mixed-method approach makes it practical on transformative learning as it relates to adult learners in higher education. Thus, this study used a sequential explanatory mixed-method design to test factors that promote transformative learning experiences of international graduate-level learners in relation to their demographic characteristics and colleges.

This mixed-method design involves two phases. The first phase consists of the collection and analysis of quantitative data. This is followed by the collection and analysis of qualitative data in the second phase, which builds on the results of the initial quantitative results (Creswell, 2009). According to Creswell (2009), the sequential explanatory mixed-methods design can aid in the explanation and interpretation of the relationships between variables. The intent of using a sequential explanatory design was
to determine possible primary effects of independent variables in those who experienced or did not experience transformative learning. The dependent variable was identified as transformative learning, and the independent variables were the factors that promoted transformative learning experiences of international graduate-level learners. A sequential explanatory mixed-methods design was used to collect and analyze data on transformative learning experiences of international graduate-level learners.

Taylor’s (2000) analysis of research studies from approximately 46 dissertations on transformative learning theory called for more research on factors that promote transformative learning of adult learners in higher education. He noted that while existing publications had direct implications for classroom teaching, these publications were obtuse, overly academic, and difficult to access. After an extensive review on transformative learning research, it was noted that few quantitative studies exist on transformative learning experiences of adult learners (Taylor, 2000).

Quantitative or positivist research inquiry is grounded on the assumption that features of the social environment constitute an objective reality, that is, relatively constant across time and settings. The dominant method of this investigation is to describe and explain features of this reality by collecting numerical data on observable behaviors of the sample and by subjecting these data to statistical analysis (Gall, Borg, & Gall, 2007). Quantitative research is the means of testing objective theories by measuring and examining relationships among variables. Variables are measured using instruments. These enumerated variables are then analyzed with statistical procedures (Creswell, 2008). In quantitative research, the researcher uses positivist claims for developing knowledge, such as reduction to specific variables, use of measurement,
observation, and test of theories. The variables are then separated and correlated to determine proportion and frequency of relationships. Quantitative study determines which variables to study and chooses instruments that result in reliable and valid scores.

Qualitative research, on the other hand, is a method for exploring and understanding the meaning individuals or groups ascribe to social or human problems. According to Creswell (2007), qualitative research is the process of research that includes emerging questions and procedures, data building from particulars to general themes for the researcher to make interpretations of the meaning of the data. Qualitative research involves an inquiry process of understanding through which the researcher develops a “complex, holistic picture, analyzes words, reports detailed views of participants, and conducts the study in a natural setting” (Creswell, 2003, p. 18).

In qualitative research, data collection is at the site where participants experience the issue under study. Data are collected from those immersed in the everyday life of the setting in which the study is framed. Creswell (2009) states that data analysis in qualitative research is when researchers build their patterns, categories, and themes from the bottom up where the data are then organized into more abstract units of information. Qualitative research is based on inductive data analysis where the researcher works between the themes and data to establish a credible set of information.

The mixed-methods approach is a means of inquiry that combines both qualitative and quantitative forms of research. The mixed-method approach draws its philosophy from pragmatism, where quantitative and qualitative approaches can be combined within a single study (Johnson & Onwuegbuzie, 2004). According to Tashakkori and Teddlie (2003), both numerical and text data, collected sequentially or concurrently, can help
better understand the research problem. Johnson & Onwuegbuzie (2007) define a mixed-method investigation as the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the purposes of breadth and depth of understanding and corroboration in designing a mixed-methods study. It also involves the use of both qualitative and quantitative approaches in a study by collecting and analyzing data. The purpose of this approach is to achieve greater strength than in qualitative or quantitative research study alone (Creswell & Plano Clark, 2007).

In designing mixed-methods research, Creswell (2003, 2007, 2009) explained that the timing of the qualitative and quantitative data collection must be taken into consideration. The question of whether the data collected in sequences or in chronological stages will be determined by the research process. The final part is the connection of qualitative and quantitative data collected and integrating the two data sets together. A sequential explanatory mixed-methods design (Creswell, 2007, 2009; Creswell & Plano Clark, 2011) was used for this study. First, data collection in the quantitative phase was a paper version of the modified Learning Activities Survey. Pearson chi-square test was used to investigate the relationship between the demographic characteristics, colleges, and factors that promote transformative learning experiences of international graduate-level learners. Second, follow-up interviews in a semi-structured format were conducted for the qualitative phase.

The results from the quantitative data analysis part of the modified Learning Activities Survey were used to determine the selection of participants for the follow-up
interviews by stratified random sampling across gender, age group, continent of birth, and colleges. This was determined from participants who indicated in the questionnaire that they experienced transformative learning associated with education, non-school related activities, or both. Participants agreed to volunteer for the follow-up interview by checking “Yes” in the follow-up sign-up interview form.

Research Questions

Research questions for this study included the following:

1. What are the factors that promote transformative learning experiences of international graduate-level learners?
2. What proportion of international graduate-level learners appear to have had transformative learning experiences?
3. Do the factors that promote transformative learning experiences of international graduate-level learners differ by demographic characteristic?
4. Do the factors that promote transformative learning experiences of international graduate-level learners differ by college?

Considering the above research questions, this research tested the following hypotheses for the study:

1. There will be no differences in the transformative learning experiences identified by international graduate-level learners based on demographic characteristic.
2. There will be no differences in the transformative learning experiences identified by international graduate-level learners based on college.
Population and Sample

The population for this study included international graduate-level learners who have been admitted to the University of South Florida and have taken two courses prior to or during Fall 2010. The criteria consisted of international graduate-level learners with the status of Full-time or Part-time student with F1 or J1 student visas as required by the university. The target population did not include international graduate-level learners whose visa status had changed or had since become naturalized United States citizens. Selected participants included international graduate-level learners from the colleges of (a) Arts and Sciences and (b) Engineering. Participants were from the above colleges because International Services (USF World) annual report (Fall 2010) indicated that the majority of international graduate-level learners are enrolled at the colleges of Arts and Sciences and Engineering. The majority of international graduate-level learners come from Asia, Europe, and Latin America (including South America), and Africa. A population of about \((N=560)\) international graduate-level learners who attend the University of South Florida from the two aforementioned colleges in the database met the criteria for this study. Type I error rate for the research investigation is expected to be 5% \((\alpha=0.05)\). Power for this study was measured at approximately 0.80, since value less than 0.80 would be too great a risk of committing a Type II error, and a larger value would require sample sizes most likely beyond the resources for this research.

Learning Activities Survey

King’s (1997a) Learning Activities Survey instrument was developed on the theoretical basis of Mezirow’s (1978, 1991a), Cranton’s (1994), and Brookfield’s (1986, 1987, 1995) work. See Appendix A for the original copy of the Learning Activities
Survey questionnaires. In designing the instrument, King (1997a) used other sources such as Williams (1995), and Baxter Magolda’s (1992) instrument, the measure of epistemological reflection. The aforementioned instruments provided in-depth information for King (1997a) to include many questions in the follow-up interview questions that assess the participant’s level of epistemological reflection (nature of knowledge). See Appendix B for a copy of the Learning Activities Survey follow-up interview questions. In addition, the developer of the Learning Activities Survey has given permission to the researcher to adopt and make modifications to the demographic information section of the instrument. See Appendix C for a copy of letters of authorization. This section explained quantitative and qualitative developments as well as describe measures of reliability and validity of the instrument.

Learning Activities Survey questionnaires. The instrument has four sections. The first section asks the participants to indicate the experiences they have encountered in relation to the 10 tenets of Mezirow’s transformative learning theory (see Appendix A). This includes question one in the instrument that uses Mezirow’s original 10 stages of perspective transformation.

The second section asks participants to identify specific learning experiences that facilitate perspective transformation among adult learners. These include (a) critical thinking assignment—term papers, periods of deep thoughts, assigned readings, personal reflection, and personal journals; (b) classroom discussions—group and class projects, cooperative activities, and class discussions of concerns; (c) student self-assessments—personal learning assessments (PLA’s), and self-evaluation courses; (d) discovery of one’s voice—classroom discussions, personal journals and writing about concerns; (e)
support—by faculty advisor, classmates, student, or other persons; and (f) miscellaneous learning activities such as lab experiences, class activities, nontraditional structure of courses, and cooperative learning (King, 1997a, 2000). In addition, questions in section two of the instrument asks participants to reflect on their values, beliefs, and assumptions in relation to personal and social change and provide brief descriptions about perspective transformation as related to their educational experiences.

The third section asks participants to provide learning experiences they have encountered at their respective learning institution. This includes questions four, five, six, and seven. Question four asks participants information on what learning activities and events may help to facilitate perspective transformation. Question six asks participants to reflect on past behaviors based on educational background. Question seven asks participants which specific learning activities in the classroom help foster perspective transformation experiences. In general, Questions one, two, three, and five guide participants to reflect on the learning experiences of change. Questions three and five require participants to give free response answers.

The fourth section asks participants for information about their demographic characteristics such as age, gender, ethnicity, degree program, prior education, and number of semesters at the institution. These includes the last six questions (#8-14) of the instrument that require participants to provide demographic information such as age, level of education, degree program, number of semesters in school, marital status, race and ethnicity. The instrument is scored as follows: Score for each participant is on a scale of one to three. This scale “PT-Index” (Perspective Transformation Index) determines how adult learners experience perspective transformation associated with
education experience. If participants indicate that they have experienced perspective transformation in the course of their educational program, they are assigned a score of “3.” In this case participants must have checked one or more questions in item one and “Yes” in item two. Participants must also make written statement of what caused the change in perspective transformation in items three and five. For example, “I had an experience in class that caused me to question the way I normally act.” Again, the change in perspectives should happen while being in school and must have been influenced by faculty support, classroom discussions, personal journal, personal reflection, term papers, self-evaluation in a course, critical thinking, assigned readings or lab experiences. If participants indicate that they have experienced perspective transformation associated with non-education, they receive a score of “2.” Here, participants must have checked one or more questions in item one and “Yes” in question two, but the change in perspectives occurred outside of school by the following: loss of job, moving/relocation, divorce or separation, death of a loved one, and change of job. Finally, if participants do not identify perspective transformation experience they receive a score of “1.” This means that the participant checked the last item in question one (I do not identify with any of the statements above). Thus, the participant did not experience any form of perspective transformation either associated with education or out of school related learning activities. In this study, those who experienced transformative learning were either identified as having had educational, non-educational experiences, or both (the combined PT-Index of 2 and 3).

**Learning Activities Survey follow-up interview.** The Learning Activities Survey follow-up interview has 11 questions that requires participants to explain in detail what
factors caused them to experience perspective transformation (see Appendix B). Results from the quantitative data analysis were used to select participants for the follow-up interview by stratified random sampling across gender, college and continent of birth. This was determined from participants who indicated in the questionnaire that they experienced perspective transformation associated with education and non-education as evidenced in the data analysis. Participants checked “Yes” in the follow-up sign-up interview form to agree to volunteer for the follow-up interview. Questions in the qualitative part of the instrument are open-ended and semi-structured. Questions 1 to 3 required participants to explain how they experienced perspective transformative learning and what triggered it.

Question 4 has six items that determined who facilitated the change, what factor or factors caused participants to experience the change, and information on emotional patterns that caused perspective transformation of participants. Examples include student and teacher support, faculty advisor support, classmates, and class assignments that influenced the change—class project, personal journal, internship, assigned reading in a course, personal reflection, self-evaluation, lab experiences, term papers and essays classroom discussions, and personal learning assessment (PLA). The last three questions in the instrument (5 to 8) asked participants to provide an in-depth information about how they experienced new changes in life associated with education and out of school related activities.

**Demographic Information**

The demographic information for this study was modified from the original *Learning Activities Survey* (King, 1997a) in order to address the research questions posed
for the study about factors that promote transformative learning experiences of international graduate-level learners. See Appendix D for a copy of the modified *Learning Activities Survey*. The original demographic information consisted of sex, marital status, race, current major, prior education, and age. Race, prior education, and current major were changed to race/ethnicity, previous education, and degree program. Colleges included the Colleges of Arts and Sciences and Engineering. Continent of birth/geographical region included Africa, Asia, Europe, and Latin America including countries in South America. Age groups were combined into slightly different categories rather being categories of every five years of 18-25 years, 26-30 years, 31-35 years, 36-40 years, 41-45 years, 46-50 years, 51 and above years. They became ten years increments of 20-29 years, 30-39 years, 40-49 years, 49 years, and above. The following questions were added to the original instrument (what is your degree program, how long have you been in the United States, and how many semesters have you been enrolled at the University of South Florida). Previous education, race/ethnicity, and marital status were not accounted for during the coding and analysis of data for the study.

**Validity of the Learning Activities Survey.** King (1997a) addressed the issue of content and construct validity by using an array of methods of inputs and evaluation of the instrument including a pilot study and by adaptations suggested by a panel of experts. Successive interviews and samples in the pilot study led to formative adaptation of the instrument. Triangulation and member-checking of results from the pilot study also helped to validate formation of the instrument.

This was conducted to produce the best practice approach to instrument development and validation in unusual contexts (Tashakkori & Teddlie, 2003). A panel
of experts on transformational learning reviewed, critiqued and made several suggestions
to the instrument. The questions of the items were correlated in pair-wise to depict
consistent characterization of responses. Again, responses to the items in the instrument
and follow-up interviews were matched to ensure that respondents could be identified by
name.

**Reliability of the *Learning Activities Survey*.** According to King (1997a),
questions in the PT-Index in the instrument were used to check the consistency of results
of the instrument to determine evaluation of responses to several items in the instrument.
King (1997a) also evaluated each of the items separately and developed a composite PT-
Index (Perspective Transformation). The *Learning Activities Survey* instrument has been
modified and reviewed several times recently and used in different studies. These
include (a) Higher education LAS format (1997-1998), (b) English Learners of Second
Language (King, 2000), (c) General Educational Development Learning Activities
Survey (King, 2003), (d) Adult Basic Education Learning Activities Survey (King &
Wright, 2003), (e) Face-to-Face Teachers Learning Technology Learning Activities
Survey (King, 2002), (f) Higher Education Faculty Learning Technology Learning
Activities Survey (King, 2003), and (g) Teachers in Science Education Classes Learning
Activities Survey (King & Kerekes, 2008).

Table 1 illustrates a detailed description of types of information gathered for each
question and means of measurement.
Table 1

*Types of Information Gathered for Each Question and Means of Measurement*

<table>
<thead>
<tr>
<th>Variable/Source</th>
<th>Means of Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Identifiers of Transformative Learning</strong></td>
<td>Paper and Pencil Scoring</td>
</tr>
<tr>
<td>LAS(^a)</td>
<td>The PT-Index indicates whether the participant experienced perspective transformation in association with their educational experiences</td>
</tr>
<tr>
<td>LAS(^b) Q# 1, 2, 3, &amp; 5</td>
<td>If participant indicated perspective transformation associated with their educational experience PT-Index=3. Perspective transformation outside of school related learning activities PT-Index=2, and no perspective transformation PT-Index=1</td>
</tr>
<tr>
<td>Q# 3</td>
<td>Brief summary of past experiences</td>
</tr>
<tr>
<td>Q # (4a-c)</td>
<td>Factors that influenced the change in transformation</td>
</tr>
<tr>
<td>Q# (7a-b)</td>
<td>Participants learning experiences at college</td>
</tr>
<tr>
<td><strong>Factors Promoting Transformative Learning</strong></td>
<td>LAS Follow-Up Interviews</td>
</tr>
<tr>
<td>Q# 1-7</td>
<td>Stratified random sample was used to select participants for the follow-up interview based on data analysis from the quantitative section of the LAS across gender, age groups, continent of birth and colleges. Interviews will include participants who experienced transformative learning in the course of their educational program PT-Index=3 or both. Interviews was within a semi-structured format</td>
</tr>
<tr>
<td>Q# 2 &amp; 6</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Demographics and Additional Questions Directly Related to Study (LAS Q# 9-14)</td>
<td>Includes age, gender, college, continent of birth, number of semesters, number of years, and ethnicity.</td>
</tr>
<tr>
<td>Scoring in Quantitative Section of LAS</td>
<td>For the quantitative section, percentages, frequencies, and chi-square will be used to analyze the data.</td>
</tr>
<tr>
<td>Analysis in Qualitative Section of LAS</td>
<td>Responses from question 3 and 5 will be coded based on major categories and themes that will emerge from the interviews.</td>
</tr>
</tbody>
</table>

\(^a\)LAS—Learning Activities Survey Instrument  
\(^b\)Q#—Question Numbers  
Means—Instrument, Questions and Scoring  

*Note. The dependent variables will be identifier of transformative e learning, and the independent variables are the factors that promote transformative learning.*
Pilot Study

The purpose of the pilot study was to establish the integrity of the data collection methods, interviews, and assess the performance of the modified instrument for data collection. With permission from the office of the International Student Affairs (USF), the researcher had access to international graduate-level learners e-mail addresses (participants). Three emails were sent to participants in a period of three weeks to update them about the purpose and reasons why they have been chosen for the pilot study. See Appendix E for email letter to participants.

Two presentations were made to participants to provide detailed information about the sections of the survey at various USF international student associations’ meetings. Participants were assured that their responses would be confidential. This was guaranteed by numbering sequentially the modified Learning Activities Survey with the follow-up sign-up form. See Appendix F for research study presentation to participants and Appendix G for a copy of IRB approval letter.

The modified Learning Activities Survey questionnaire was sent to 50 international graduate-level learners to complete via an online survey. The online survey was set up such that participants could access or complete survey at one time. In the first attempt, 12 participants completed the survey. As a result of the low turn out, a second email was sent to participants who did not respond to the first email to remind them to complete the survey. Only five respondents completed the survey. To increase the percentage response rate, a third email was sent to participants who did not respond to the second email. Eleven respondents completed the survey.
Finally, a total of 38 participants consisting of twenty-three males and fifteen females ($N=38$) from the colleges of (a) Engineering, (b) Education, (c) Arts and Sciences, (d) Behavioral and Community Sciences, and (e) Business completed the online survey. It should be noted that study participants did not complete the online questionnaire of the modified *Learning Activities Survey* at the same time for both study 1 and 2. This explains the disparity in sample sizes for the various factors in tables 4, 5, 6, 7, 9 and 9 below. The whole sample of participants in the pilot study was entered into Statistical Analysis Software (SAS) for analysis to determine the relationships of colleges, demographic characteristics, and variables such as classroom discussion, critical thinking, personal reflection, and mentoring as related to transformative learning.

**Results.** To check the reliability of the modified *Learning Activities Survey* instrument, a pilot study was administered to test the percentage agreement of the items in the instrument for the educational (classroom discussion, personal self-reflection, critical thinking, mentoring, class projects, assigned readings, term papers, laboratory experiences) and non-educational (marriage, moving/relocation, change of job, loss of job, divorce/separation, death of a loved one, and learning new culture) factors.

Participants who checked “Yes” to question two in the survey (*Since you have been taking courses at USF, do you believe you have experienced a time when you realized that your values, beliefs, opinions, or expectations had changed?*) were categorized to have experienced perspective transformative learning representing 54.8% whereas participants who checked “No” to question two (*Since you have been taking courses at USF, do you believe you have experienced a time when you realized that your values, beliefs, opinions, or expectations had changed? If you checked “m” on question
were categorized as participants who did not experience perspective transformative learning representing 45.2%.

A detailed description of how participants responded to perspective transformation by educational classroom discussion, personal self-reflection, critical thinking, mentoring, class projects, term papers, assigned readings, and laboratory experiences) and non-educational (marriage, moving/relocation, change of job, loss of job, divorce/separation, death of a loved one, and learning new culture) factors are explained below.

Table 2 presents crosstabulation of responses for educational factors by pilot study 1 and 2. As seen in table 2, crosstabulation of responses for classroom discussion reveals that eleven participants checked yes for study 1 and yes for study 2. Five participants checked no for study 1 and yes for study 2. Four participants checked yes for study 1 and no for study 2 and eight participants checked no for study 1 and no for study 2. The percentage agreement for participants who experienced perspective transformation by classroom discussion was 68%.

In addition, crosstabulation of responses for personal self-reflection by pilot study 1 and 2 shows that fourteen participants checked yes for study 1 and yes for study 2. Five participants checked no for study 1 and yes for study 2. Three participants checked yes for study 1 and no for study 2. Six participants checked no for study 1 and no for study 2. The percentage agreement for participants who experienced perspective transformation by personal reflection was 71%.

For critical thinking and responses for pilot study 1 and 2. 12 participants checked yes for study 1 and yes for study 2. Three participants checked no for study 1
and yes for study 2. Four participants checked yes for study 1 and no for study 2. Nine
participants checked no for study 1 and no for study 2. The percentage agreement for
participants who experienced perspective transformation by critical thinking was 75%.

Crosstabulation of responses for mentoring by pilot study 1 and 2 indicate that 15
participants checked yes for study 1 and yes for study 2. Three participants checked no
for study 1 and yes for study 2. Two participants checked yes for study 1 and no for
study 2. Eight participants checked no for study 1 and no for study 2. The percentage
agreement for participants with who experienced perspective transformation by
mentoring was 82%.

As seen in Table 2, responses for assigned readings by pilot study 1 and 2 reveals
that 19 participants checked yes for study 1 and yes for study 2. Two participants
checked no for study 1 and yes for study 2. Two participants checked yes for study 1 and
no for study 2. Five participants checked no for study 1 and no for study 2. The
percentage agreement for participants who experienced perspective transformation by
assigned readings was 86%.

Additionally, crosstabulation of responses for laboratory experiences and pilot
study 1 and 2 indicates that 17 participants checked yes for study 1 and yes for study 2.
Three participants checked no for study 1 and yes for study 2. Three participants checked
yes for study 1 and no for study 2. Six participants checked no for study 1 and no for
study 2. The percentage agreement for participants who experienced perspective
transformation by assigned readings was 82%.
Table 2

*Crosstabulation of Responses for Educational Factors by Pilot Study 1 and 2*

<table>
<thead>
<tr>
<th>Educational factors/Response</th>
<th>Pilot Study 1</th>
<th></th>
<th></th>
<th>Pilot Study 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>n</td>
<td>%</td>
<td>No</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Classroom Discussion</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>11</td>
<td>68.8</td>
<td>4</td>
<td>33.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>5</td>
<td>31.2</td>
<td>8</td>
<td>66.7</td>
<td></td>
</tr>
<tr>
<td>Personal Self-Reflection</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>14</td>
<td>73.7</td>
<td>3</td>
<td>33.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>5</td>
<td>26.3</td>
<td>6</td>
<td>66.7</td>
<td></td>
</tr>
<tr>
<td>Critical Thinking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>12</td>
<td>80.0</td>
<td>4</td>
<td>30.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>3</td>
<td>20.0</td>
<td>9</td>
<td>69.2</td>
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<tr>
<td>Mentoring</td>
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</tr>
<tr>
<td></td>
<td>Yes</td>
<td>15</td>
<td>83.3</td>
<td>2</td>
<td>20.0</td>
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</tr>
<tr>
<td></td>
<td>No</td>
<td>3</td>
<td>16.7</td>
<td>8</td>
<td>80.0</td>
<td></td>
</tr>
<tr>
<td>Class Projects</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>18</td>
<td>81.8</td>
<td>2</td>
<td>33.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>4</td>
<td>18.2</td>
<td>4</td>
<td>66.7</td>
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</tr>
<tr>
<td>Term Papers</td>
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</tr>
<tr>
<td></td>
<td>Yes</td>
<td>17</td>
<td>73.9</td>
<td>3</td>
<td>60.0</td>
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<tr>
<td></td>
<td>No</td>
<td>6</td>
<td>26.1</td>
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<td>Assigned Readings</td>
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<td>90.5</td>
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<td>28.6</td>
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<tr>
<td></td>
<td>No</td>
<td>2</td>
<td>9.5</td>
<td>5</td>
<td>71.4</td>
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<tr>
<td>Lab Experiences</td>
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<td></td>
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<tr>
<td></td>
<td>Yes</td>
<td>15</td>
<td>78.9</td>
<td>3</td>
<td>33.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>4</td>
<td>21.1</td>
<td>6</td>
<td>66.7</td>
<td></td>
</tr>
</tbody>
</table>

*N = 28 for each factor*
Table 3 presents crosstabulation of responses for educational factors by pilot study 1 and 2. As seen in table 3, crosstabulation of responses for marriage reveals that 16 participants checked yes for study 1 and yes for study 2. Three participants checked no for study 1 and yes for study 2. Two participants checked yes for study 1 and no for study 2 and seven participants checked no for study 1 and no for study 2. The percentage agreement for participants who experienced perspective transformation by marriage was 82%.

As shown in Table 3, crosstabulation of responses for moving/relocation and pilot study 1 and 2 reveals that 20 participants checked yes for study 1 and yes for study 2. Two participants checked no for study 1 and yes for study 2. Two participants checked yes for study 1 and no for study 2 and three participants checked no for study 1 and no for study 2. The percentage agreement for participants who experienced perspective transformation by moving/relocation was 86%. In addition, 16 participants checked yes for study 1 and yes for study 2 with respect to change of job. Two participants checked no for study 1 and yes for study 2. Five participants checked yes for study 1 and no for study 2. Five participants checked no for study 1 and no for study 2. The percentage agreement for participants who experienced transformative learning by change of job was 75%. As seen in Table 3, responses for learning new culture by pilot study 1 and 2 reveals that 17 participants checked yes for study 1 and yes for study 2. Two participants checked no for study 1 and yes for study 2. Four participants checked yes for study 1 and no for study 2. Five participants checked no for study 1 and no for study 2. The percentage agreement for participants who experienced perspective transformation by assigned readings was 78%.
Table 3

*Crosstabulation of Responses for Non-Educational Factors by Study 1 and 2*

<table>
<thead>
<tr>
<th>Non-educational factors/Response</th>
<th>Pilot Study 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>%</td>
<td>No</td>
</tr>
<tr>
<td>Marriage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pilot Study 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>16</td>
<td>84.2</td>
<td>2</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>15.8</td>
<td>7</td>
</tr>
<tr>
<td>Moving/Relocation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pilot Study 1</td>
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<td></td>
<td></td>
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<tr>
<td>Yes</td>
<td>21</td>
<td>91.3</td>
<td>2</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>8.7</td>
<td>3</td>
</tr>
<tr>
<td>Change of Job</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pilot Study 1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Yes</td>
<td>16</td>
<td>88.9</td>
<td>5</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>11.1</td>
<td>5</td>
</tr>
<tr>
<td>Loss of Job</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pilot Study 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>17</td>
<td>80.9</td>
<td>4</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>19.1</td>
<td>3</td>
</tr>
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<td>Divorce/Separation</td>
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<tr>
<td>Pilot Study 1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Yes</td>
<td>12</td>
<td>80.0</td>
<td>4</td>
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<tr>
<td>No</td>
<td>3</td>
<td>20.0</td>
<td>9</td>
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<tr>
<td>Death of a Loved One</td>
<td></td>
<td></td>
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<tr>
<td>Pilot Study 1</td>
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<tr>
<td>Yes</td>
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<td>No</td>
<td>5</td>
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<td>8</td>
</tr>
<tr>
<td>Learning New Culture</td>
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<td>Pilot Study 1</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>18</td>
<td>90.0</td>
<td>5</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>10.0</td>
<td>3</td>
</tr>
</tbody>
</table>

*Note: N = 28 for each factor*
Sample sizes are different for study 1 and 2 because the study participants did not complete the online survey of the Learning Activities Survey at the same time. This explains the disparity in sample sizes for the various factors in tables 4, 5, 6, 7, 8, and 9. Table 4 presents crosstabulation of responses for critical thinking by age group. Pearson chi-square test was used to analyze the information in Table 4. A breakdown of the responses by factors is summarized in Table 4. The data in Table 4 show that critical thinking was most frequently identified by students with age group 30-39 (100%), followed by 20-29 (92.1%), 40-49 (60%), and 49 years and above (60%). A test of association showed that there was no statistically significant association between assigned readings and age group with a \( p \)-value of 0.672, \( \chi^2(3) = 7.1512 \), \( p = 0.0672 \) and a relatively medium effect size (Cohen’s \( w = 0.4655 \)).

Table 4

*Crosstabulation of Responses for Critical Thinking by Age Group*

<table>
<thead>
<tr>
<th>Response</th>
<th>20-29 yrs</th>
<th>30-39 yrs</th>
<th>40-49 yrs</th>
<th>49+ yrs</th>
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</thead>
<tbody>
<tr>
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<td>( n )</td>
<td>( n )</td>
<td>( n )</td>
<td>( n )</td>
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<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Yes</td>
<td>12</td>
<td>10</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>92.1</td>
<td>100</td>
<td>60.0</td>
<td>60.0</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>7.69</td>
<td>0.0</td>
<td>40.0</td>
<td>40.0</td>
</tr>
</tbody>
</table>

\( N=33, \ p\text{-value} = 0.0672, \ w = 0.4655, \ yrs = \text{years} \)

Table 5 shows crosstabulation of responses for classroom discussion by age group. Pearson chi-square test was used to analyze the information in Table 5. A breakdown of the responses by factors is summarized in Table 5. The information in Table 5, shows that classroom discussion was most frequently identified by students with age group 20-29 (100%), followed by 30-39 (81.8%), 49 years and above (40%), and 40-
49 (20%). A test of association showed that there was a statistically significant
association between classroom discussion and age group with a \( p \)-value of 0.001, \( \chi^2(3) = 16.606, p = 0.001 \) and a relatively large effect size (Cohen’s \( \omega = 0.679 \)).

Table 5

Crosstabulation of Responses for Classroom Discussion by Age Group

<table>
<thead>
<tr>
<th></th>
<th>20-29 yrs</th>
<th>30-39 yrs</th>
<th>40-49 yrs</th>
<th>49+ yrs</th>
<th>( \chi^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>15</td>
<td>9</td>
<td>1</td>
<td>2</td>
<td>16.606</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

\( N = 36, p\)-value = 0.001, \( \omega = 0.679 \), yrs = years

Table 6 presents crosstabulation of responses for personal reflection by age group.

A breakdown of the responses by factors is summarized in Table 6. Pearson chi-square
test was used to analyze the information in Table 6. As seen in Table 6 personal self-
reflection was most frequently identified by students with age group 20-29 (100%),
followed by 30-39 (71.4%), 40-49 (40%), and 49 years and above (40%). Chi-square
tests show that there was a statistically significant association between personal self-
reflection and age group with a \( p \)-value of 0.015, \( \chi^2(3) = 10.422, p = 0.015 \) and a
relatively large effect size (Cohen’s \( \omega = 0.589 \)).
Table 6

**Crosstabulation of Responses for Personal Self-Reflection by Age Group**

<table>
<thead>
<tr>
<th>Response</th>
<th>20-29 yrs</th>
<th>30-39 yrs</th>
<th>40-49 yrs</th>
<th>49+ yrs</th>
<th>$\chi^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>13 100%</td>
<td>5 71.4%</td>
<td>2 40.0%</td>
<td>2 40.0%</td>
<td>10.42</td>
</tr>
<tr>
<td>No</td>
<td>0 0.0%</td>
<td>2 28.6%</td>
<td>3 60.0%</td>
<td>3 60.0%</td>
<td></td>
</tr>
</tbody>
</table>

$N = 30, p$-value = 0.015, $w = 0.589$, yrs = years

Table 7 presents crosstabulation of responses for critical thinking by college.

Critical thinking was most frequently identified by students from the colleges of Arts and Sciences (100%), followed by Business (87.5%), Education (83.3%), Engineering (83.3%), and Behavioral and Community Sciences (75%). A test of association showed that there was no statistically significant association between critical thinking and college with a $p$-value of 0.585, $\chi^2(4) = 2.839$, $p = 0.585$, and a small effect size (Cohen’s $w = 0.269$).

Table 7

**Crosstabulation of Responses for Critical Thinking by College**

<table>
<thead>
<tr>
<th>Response</th>
<th>A &amp; S$^a$</th>
<th>Bus$^b$</th>
<th>College</th>
<th>Eng$^d$</th>
<th>Beh Sci$^e$</th>
<th>$\chi^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$n$</td>
<td>$%$</td>
<td>$n$</td>
<td>$%$</td>
<td>$n$</td>
<td>$%$</td>
</tr>
<tr>
<td>Yes</td>
<td>11</td>
<td>100</td>
<td>7</td>
<td>87.5</td>
<td>5</td>
<td>83.4</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>12.5</td>
<td>1</td>
<td>16.7</td>
</tr>
</tbody>
</table>

$N=39, p=0.585, w = 0.269$, $^a$A & S = Arts and Sciences, $^b$Bus = Business, $^c$Edu = Education, $^d$Eng = Engineering, $^e$Beh & Sci = Behavioral and Community Science
Table 8 presents crosstabulation of responses for classroom discussion by college. Classroom discussion was most frequently identified by students from the colleges of Arts and Sciences (88.8%), followed by Engineering (83.3%), Education (72.7%), Business (66.7%), and Behavioral and Community Sciences (42.9%). A test of association showed that there was no statistically significant association between classroom discussion and college with a p-value of 0.322, $\chi^2(4) = 4.670$, $p = 0.585$ and a relatively medium effect size (Cohen’s $\omega = 0.346$).

Table 8

*Crosstabulation of Responses for Classroom Discussion by College*

<table>
<thead>
<tr>
<th>Response</th>
<th>A &amp; S(^a)</th>
<th>Bus(^b)</th>
<th>College</th>
<th>Eng(^d)</th>
<th>Beh Sci(^e)</th>
<th>$\chi^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$n$</td>
<td>%</td>
<td>$n$</td>
<td>%</td>
<td>$n$</td>
<td>%</td>
</tr>
<tr>
<td>Yes</td>
<td>8</td>
<td>88.9</td>
<td>4</td>
<td>66.7</td>
<td>8</td>
<td>72.7</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>11.1</td>
<td>2</td>
<td>33.3</td>
<td>3</td>
<td>27.3</td>
</tr>
</tbody>
</table>

$N=39$, $p=0.3228$, $\omega = 0.346$, \(^a\)A & S = Arts and Sciences, \(^b\)Bus = Business, \(^c\)Edu = Education, \(^d\)Eng = Engineering, \(^e\)Beh & Sci = Behavioral and Community Sciences

Table 9 displays crosstabulation of responses for personal reflection by college. Personal self-reflection was most frequently identified by students from the colleges of Arts and Sciences (100%), followed by Education (84.6%), Engineering (71.4%), Business (66.7%), and Behavioral and Community Sciences (50%). A test of association showed that there was no statistically significant association between personal self-reflection and college with a p-value of 0.181, $\chi^2(4) = 6.246$, $p = 0.181$ and a relatively medium effect size (Cohen’s $\omega = 0.3903$).
### Table 9

*Crosstabulation of Responses for Personal Reflection by College*

<table>
<thead>
<tr>
<th>Response</th>
<th>College A &amp; S&lt;sup&gt;a&lt;/sup&gt;</th>
<th>College Bus&lt;sup&gt;b&lt;/sup&gt;</th>
<th>College Edu&lt;sup&gt;c&lt;/sup&gt;</th>
<th>College Eng&lt;sup&gt;d&lt;/sup&gt;</th>
<th>College Beh Sci&lt;sup&gt;e&lt;/sup&gt;</th>
<th>( \chi^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>9 · 100%</td>
<td>4 · 66.7%</td>
<td>11 · 84.6%</td>
<td>5 · 71.4%</td>
<td>3 · 60.0%</td>
<td>6.246</td>
</tr>
<tr>
<td>No</td>
<td>0 · 0.0%</td>
<td>1 · 33.3%</td>
<td>2 · 15.4%</td>
<td>2 · 28.6%</td>
<td>2 · 40.0%</td>
<td></td>
</tr>
</tbody>
</table>

\( N=41, p=0.181, \omega = 0.3903, \)  
<sup>a</sup>A & S = Arts and Sciences,  
<sup>b</sup>Bus = Business,  
<sup>c</sup>Edu = Education,  
<sup>d</sup>Eng = Engineering,  
<sup>e</sup>Beh & Sci = Behavioral and Community Sciences

**Follow-Up Interviews.** The purpose of the follow-up interview was to gather additional information on how participants experienced transformative learning and expand on the results of the quantitative phase of the survey. A total sample of five participants (three males and two females) who experienced transformative learning were selected and interviewed by stratified random sampling across gender, continent of birth, and colleges. Selected participants agreed to participate in the follow-up interviews and checked “Yes” on the follow-up interview sign-up form.

Atlas.ti software was used to analyze qualitative data. The researcher read through all the data. Researcher wrote memos after reading through all the data. Labels were assigned to the codes. The codes were grouped into segments and categories. A peer reviewer read through the interview transcripts, grouped codes into categories and themes. This helped to triangulate and establish credibility for the data. Major themes were developed from the categories and compared with the themes selected by the peer reviewer. A panel member independently reviewed and analyzed the interview transcripts. Research questions were used as the framework in analyzing the data.
Member checking of the panel member and the peer reviewer helped to reduce any potential bias during data coding and analysis.

The researcher examined all the transcripts again to make sure that categories, themes, and findings from the data were consistent with the data. The researcher compared emerged themes with information in the literature review to verify if it is supported or not supported by the literature review. Classroom discussions, class projects, and faculty support emerged as the major themes. The majority of the participants indicated that the above themes influenced them to critically examine their values, beliefs, and past experiences. One participant said,

After two semesters of course at USF, I have realized that my attitudes and opinions towards social life (cultures here) have changed. In the beginning it was difficult for me to adapt and learn the culture but I am okay with the culture now.

Another participant stated, “Classroom discussions and class projects helped me to understand the academic concepts and culture. It offered me the opportunity to interact with my classmates. This made me re-evaluate my old thoughts and beliefs”.

According to King (2000), as stated in the literature review, classroom discussions provide enabling environments for adult learners to experience perspective transformation as they get the opportunities to share ideas based on their individual background experiences. Faculty support was another theme that emerged. A participant commented

My mentor provided me with all the necessary academic support, guided me on how to conduct research and write peer reviewed papers. I have been exposed to many research opportunities because of his assistance. This was new to me as I hardly got this support during my undergraduate studies in Egypt.
As indicated in the literature review, mentoring is an important step in helping adult learners in their perspective transformative learning. It is a powerful instrument in the journey to transformation (Daloz, 1999).

Results from the pilot study helped establish reliability and content validity of the questionnaire. Based on the results of the survey, revisions were made to the demographic section. For instance, there were complaints about the language clarity of some of the items in the survey. In relation to gender, more female respondents were selected for the follow-up interviews than males. Question 11 in the original survey was changed from current major to college program. Colleges included the Colleges of Arts and Sciences and Engineering. Age groups were changed from five-year increments to 10 years increments. Continent of birth was added to the survey. Inclusive to this question are Africa, Asia, Europe, and Latin America (including countries in South America).

The above changes were made because data from USF International Services 2010 annual report indicates that the majority of international graduate-level learners come from the aforementioned locations. The following questions were added to the survey: How long have you been in the United States? and How many semesters have you been enrolled at USF? Upon several visits to different groups of international student associations, many participants recommended that it would be more advantageous for them to complete the survey by paper-and-pencil version “in person”. Most participants complained that while the emailed survey was detailed and informative, they did not personally know the researcher. Thus, making them hesitant to complete the online survey.
Collection of Data

Collection of data was divided into two phases, quantitative and qualitative. In the sequential explanatory mixed-methods design, collection of data is by either quantitative to qualitative or qualitative to quantitative method. In this study, the order of data collection was from quantitative to qualitative.

Quantitative phase. The quantitative phase of this study investigated the relationship between participants who experienced transformative learning associated with education factors (PT-Index 3) such as critical thinking, classroom discussions, mentoring, personal self-reflection, class projects, term papers/essays, assigned readings, laboratory experiences and non-education factors including marriage, moving, loss of job, change of job, death of a loved one, divorce/separation, learning new culture, and others by demographic characteristics and programs.

A paper version of the modified Learning Activities Survey was used for data collection. With permission from the office of the International Services (University of South Florida Tampa Florida), the researcher met with participants (international graduate-level learners) at various international students associations. These meetings included updates about the purpose and rationale for the study. Random sampling was used to select the participants to control possible confounding effects (Gall, Borg, & Gall, 2007). The presidents of various international student associations were consulted prior to the initial meetings with the target population for assistance in distributing and collecting of completed surveys. International student associations included: (a) African Students Association, (b) Association of Filipinos in America, (c) Asian Students in America, (d) Association of Belize Students, (e) Arab American Cultural Club, (f)
Europeans at USF, (g) Friendship Association of Chinese Students and Scholars, (h) Hindu Students Council, (i) Indian Cultural Student Association, (j) Korean American Students Association, (k) Latin American Student Association, (l) Lebanese Students Association, (m) Organization of Arabs Students in America, (n) Pakistani Students Association, (o) Russian Club, (p) Taiwanese Students Association, (q) Thai International Student Association at USF, (r) Venezuelan Student Association at USF, and (s) Vietnamese Student Association.

Participants received detailed information about the survey and assured of their confidentiality. Surveys were numbered sequentially with that of the follow-up interview sign-up form where participants had the option to check “Yes” or “No” to volunteer for the follow-up interview. The researcher made presentations to target populations in February 2011 to explain the purpose of the study (Dillman, Christian, & Smyth, 2009) (see Appendix F)

**Qualitative phase.** The purpose of data collection in a mixed-methods study is to develop answers to the research question (Teddlie & Yu, 2007). The qualitative phase of the study was based on the results of the statistical analysis from the quantitative data. According to Gliszczinski (2005), King (1997a), and Taylor (2000), transformative learning has been studied primarily with qualitative methods because it is the central place of individual experiences. Selected participants included international graduate-level learners from the colleges of (a) Arts and Sciences and (b) Engineering who experienced transformative learning associated with education. Participants selected agreed to volunteer for the follow-up interviews based on the results from the quantitative analysis across demographic characteristics and colleges. The follow-up interview
questions were open-ended that consisted of 11 questions designed to get detailed information on what facilitates transformative learning experience of international graduate-level learners.

The purpose of the follow-up interview was to expand on the results of the quantitative phase. This has the advantage of providing standard data across respondents and greater depth of information (Gall, Borg, & Gall, 2007). Participants who indicated their willingness to participate in the study as evidenced in the sign-up form for follow-up interview were asked to volunteer for the interview. Stratified random sampling was used to select nine participants for the follow-up interview across gender, colleges, and demographic characteristics. In this study, triangulation of different data sources such as methods, and theory was used in the interpretation of the analysis (Creswell, 2007).

Interview questions consisted of one closed-ended and seven open-ended questions. Questions for the follow-up interview included (a) thinking back over your education at your institution, have you experienced a time when you realized that your values, beliefs or expectations had changed?; (b) briefly describe that experience; (c) describe how any of the educational experiences such as class project, term papers, critical thinking and others influenced the change; (d) what specific activities or factors influenced your perspectives at school or out of school?; (e) describe what caused the change in perspectives; (f) explain what made you aware of the change; and (g) what did you feel about the change? Interviews were face-to-face with individual participants. Participants were debriefed in order to get clarity of the interview questions and the importance of the study’s objective.
The researcher sent participants interview questions ahead of the scheduled interview time and informed the participants that the interview would be tape-recorded as well as transcribed. As a measure of member-checking, participants were given the opportunity to review and make the necessary corrections on the contents of the interview after transcription.

**Data Analysis**

The data analysis section included two sections, quantitative and qualitative phases. This involved analytic techniques that were applied to both quantitative and qualitative data and mixing the two data sequentially for interpretation of the results.

**Quantitative phase.** Descriptive statistics were used to provide answers for research questions one and two, namely (a) what are the factors that promote transformative learning experiences of international graduate-level learners? and (b) what percentage of international graduate-level learners appear to experience transformative learning? Pearson chi-square technique was used to answer research questions three and four to analyze the relationships between demographic characteristics, colleges, and factors that promote transformative learning experiences of international graduate-level learners.

Data screening of results were conducted to check if all information had been checked correctly. Descriptive statistics of variables in the survey was summarized and presented in a tabular form. Analysis of frequency was conducted to determine percentages for responses to questions in the survey. Pearson chi-square techniques helped to identify if there was differences among participants in relation to transformative learning experiences. Pearson chi-square technique was used to summarize discrepancies
between the expected number of times each of the outcomes occurred and the observed number of times each of the outcomes occurred. Pearson chi-square technique satisfied the conditions of values to be randomly drawn from the population. Pearson chi-square technique for the independent values was compared to the two sets of categories to determine whether the independent and dependent variables are distributed differently among the categories. This helped to determine the distribution of observations (frequencies) if no relationship exists. Pearson chi-square test was used to investigate the relationship between educational, non-educational factors, and transformative learning experiences of international graduate-level learners across gender, age group, continent of birth, and colleges. The educational factors considered in this study were critical thinking, classroom discussion, mentoring, personal self-reflection, assigned readings, class projects, term papers/essays, laboratory experiences, and other. The non-educational factors included marriage, moving/relocation, loss of job, change of job, death of a loved one, divorce/separation, learning new culture, and other.

**Reliability and validity.** Reliability refers to whether scores to items on an instrument are internally consistent, stable over time (test-retest correlations), and whether there was consistency in test administration and scoring (Creswell, 2009). Test-retest reliability shows that a test is reliable if the results of its repeated administration differentiate the members of a group in a consistent manner (Tashakkori & Teddlie, 2010). Interrater reliability was used as a measure to examine the agreement between the participants on the assignment of categories of the factors that promote transformative learning experiences of international graduate-level learners. Two raters evaluated the
results from the modified *Learning Activities Survey* and follow-up interview data to check if they are consistent.

Validity is the degree to which evidence and theory support the interpretation of test scores entailed by proposed uses of tests (Gall, Borg, & Gall, 2007). According to Creswell and Plano Clark (2011), quantitative validity means that the scores received from participants are meaningful indicators of the construct being measured. Content validity was used to evaluate the degree to which survey items measure the transformative learning experiences of international graduate-level learners. It showed the degree to which the various items collectively cover the material that the instrument purports to cover (Gall, Borg, & Gall, 2007). This information helped to see if survey questions are well designed to seek the needed information about factors that promote transformative learning experiences among international learners.

A panel of four professors at the Department of Adult, Career and Higher Education and Educational Measurement and Research, College of Education at the University of South Florida, who are experts in the content domain on transformative learning and research methods, examined questions in the survey to assess the content validity of the survey instrument and offered suggestions to the researcher on which questions to add, exclude or change in the survey. Panel members evaluated the instrument for language clarity, completeness, and representation of the domain. Panel members provided advice to the researcher, on which questions to change or add to the qualitative part of the modified *Learning Activities Survey* to match the content domain of the research questions posed for the study. Panel members offered suggestions on which of the demographic questions in the survey should be omitted or changed.
Qualitative phase. In a sequential explanatory mixed-methods research, a quantitative phase occurs first, followed by a qualitative phase. Analyses from the two phases are related to one another (Tashakkori & Teddlie, 2010). Follow-up interviews were used to generate data to be analyzed for categories and themes with the aid of the Atlas.ti software. According to Creswell (2009), in qualitative analysis, the researcher should (a) organize and prepare the data for analysis; (b) read through all the data, ascertain a general sense of the information and ideas participants are saying, and determine the tone of the ideas, analyze the impression of the overall depth, credibility, and use of the information; (c) code data by segmenting and labeling the text; (d) use codes to generate categories, and themes by aggregating similar codes together; (e) connect and interrelate themes; and (f) construct a narrative.

Data analysis in qualitative research involves the use of a coding or the coding process to generate a description of the setting (Creswell, 2009). After the follow-up interviews with selected respondents, the researcher read through the data and wrote memos, assigned labels to the codes, grouped codes into categories, and themes. The coding process was used to generate a number of themes on factors that facilitate transformative learning experiences of international graduate-level learners. Analysis of data followed the outlines suggested by Creswell (2007) to include (a) reading through the data, (b) dividing the text into segments of information, (c) labeling segments with codes, (d) creating a tree display of segments, (e) collapsing codes into themes, and (f) comparing themes across all cases. Finally, the researcher compared emerged major themes with information in the literature review (Creswell & Plano Clark, 2011).
**Reliability and validity.** In qualitative research, it is practical for the researcher’s approach to become consistent across different researchers and different projects (Gibbs, 2007). Gibbs suggests that the best reliability procedures for a qualitative study is to make sure that there is not a drift in the definition of codes, or a shift in the meaning of the codes during the process of coding.

This study addressed the believability and trustworthiness of the data collection (Lincoln & Guba, 2000). To validate findings of the study, data passed through the process of trustworthiness, authenticity, and credibility (Creswell & Miller, 2000). A second coder, who was a professor of adult and higher education at the Department of Adult, Career and Higher Education, University of South Florida, read through all the subsets of the transcripts and determined codes with assigned labels. The codes were grouped into categories and themes. The purpose of assigning data to a second coder was to achieve at least 80% agreement with the first categories and themes by comparing the two sets of information. This helped to determine the accuracy of the identified categories and themes for qualitative reliability.

Atlas .ti software was used to analyze that data for the follow-up interview transcripts. The researcher read through all interview transcripts (data) and wrote memos. Categories and responses were coded with assigned labels. Codes were used to generate categories and themes by aggregating similar codes together. A peer reviewer read through all the data and coded segments into categories and themes. The researcher used research questions from this study as the framework for analyzing data.

A second coder also reviewed data and identified major categories and themes based on the research questions posed for this study. This helped to determine the
accuracy of the identified categories and themes. Member checking helped in the triangulation of the coding and analysis of the data. Comparisons were made from the data to make sure it was consistent with the text from the interviews and examined which findings was supported by the literature review and finally a peer debriefer reviewed and asked questions about the qualitative phase of the study to make the study resonate with the people (Lincoln & Guba, 2000).

**Ethics**

In compliance with the Institutional Review Board (IRB) at the University of South Florida, all ethical concerns were followed. A review form was filed to provide information about the research study to include the principal investigator, project title, source of funding, type of review requested, number and type of subjects. Research permission for the application gave detailed information about the description of the research study, the statement of the problem, the purpose of the study, significance of the study, limitations, and delimitations of the study, methods, and participants in the study.

An informed consent form addressed participants about their confidentiality right, and voluntary nature of participants. The consent form addressed participants of their guaranteed rights, and assured them of no anticipated risks. A paper version of the modified *Learning Activities Survey* contained a statement relating to the compliance of the participants. Participants were coded with numbers after a hand delivered version of the modified *Learning Activities Survey* had been returned and responses kept confidential.

In the qualitative phase, selected respondents for the follow-up interviews were assigned different names for use in the data reporting of results. For the purposes of
confidentiality, all study data such as interview audio-tapes, survey electronic files, and transcripts, were only accessed by the principal investigator and will be destroyed after a period of five years. Participants were informed that data from the study would be shared with the academic community, but responses would not to be traced to individuals.

**Summary**

In this chapter, a sequential explanatory mixed-methods design was used to investigate the relationship between transformative learning experiences of participants associated with education and non-education using factors such as critical thinking, classroom discussion, mentoring, personal self-reflection, class projects, term papers/essays, assigned readings, laboratory experiences, marriage, moving, loss of job, change of job, death of a loved one, divorce/separation, learning new culture, and others by demographic characteristic and college. This study involved the collection and analysis of quantitative data in the first phase to be followed by the collection and analysis of qualitative data in the second phase that builds on the results of the initial quantitative results (Creswell, 2009). The independent variables for the study were participants who experienced transformative learning and the dependent variable were the identifier(s) of transformative learning as factors that promote transformative learning.

A pilot study was conducted to check the reliability and validity of the instrument using the modified *Learning Activities Survey*. The purpose of the pilot study was to establish the integrity of the data collection methods, follow-up interviews, and assess the performance of the modified instrument for data collection.

The population (N=560) for the study included international graduate-level learners who have been admitted to the University of South Florida as graduate students.
and have taken at least two semester courses including Fall 2010. The modified *Learning Activities Survey* was used for this study to collect and analyze data. Collection of quantitative data was in the first phase to be followed by the collection of qualitative data in a second phase to build on the results of the quantitative results. Pearson chi-square was used to investigate the relationship between factors that promote transformative learning experiences of international graduate-level learners by demographic characteristics and colleges.

The results from the quantitative analysis were used to select participants for the follow-up interviews by stratified random sampling across demographic characteristics (age group, gender, and continent of birth), and colleges (Arts & Sciences and Engineering). Pearson chi-square was used to analyze the quantitative data with the use of SPSS (Statistical Package for the Social Sciences). Data from the qualitative section was interpreted and analyzed using the Atlas.ti software.
Chapter 4

Findings

The purpose of this study was to examine factors that promote transformative learning experiences of international graduate-level learners. This chapter presents the findings of the study to include the response rate and demographic information analysis, discussion of findings, follow-up interviews, open-ended responses, observations, and summary. The sequential explanatory mixed-method design comprising quantitative and qualitative phases was used to analyze the data through the modified Learning Activities Survey instrument.

Response Rate and Demographic Information Analysis

Of the 560 questionnaires that were distributed to participants, 421 questionnaires were completed. This represents a percentage response rate of 75.17%. However, due to inconsistencies of information in some of the surveys, 19 were not included in the coding and analysis for this study. In this study, participants who experienced transformative learning checked “Yes” in question two. Participants who checked “m” box in question one and “No” in question two were coded not to have experienced transformative learning.

Score for each participant was based on a scale of one to three. This scale “PT-Index” (Perspective Transformation Index) determines how participants experience transformative learning associated with educational and non-educational experiences.
Index 3) were assigned a score of “3.” Thus, participants must have checked one or more items in question one and “Yes” in question two. Participants who experienced transformative learning associated with non-education (PT-Index 2) were scored “2.” In this case, participants must have checked “Yes” in question two but the significant change in life must have been influenced by major life changes related to culture, life experiences and job. Finally, participants who did not experience transformative learning (PT-Index 1) were coded with a score of “1.” This means that participants checked the last item in question one “m” box ("I do not identify with any of the statements above") and “No” in question 2 and for those who experienced transformative learning from both educational and non-educational experiences were categorized as combined (PT-Index of 2 and 3).

With respect to the follow-up interviews, nine participants were selected out of the 38 participants who volunteered for the follow-up interviews by stratified random sampling across gender, continent of birth, and college. The 402 participants who completed the survey were categorized into demographic characteristics such as age group, gender, college, continent of birth, number of semesters, and number of years.

Table 10 displays the frequency distribution of participants by age group. Participants between 20 and 29 years accounted for 54.2% followed by those between 30 and 39 years, 37.3%; 40 and 49 years, 8.0%; and 49 years and above, 0.5%. An analysis of these percentages reveals that the majority of the participants were between 20-29 and 30-39 years. The frequency distribution of 49 years and above was small 0.5%.
Table 10

*Frequency Distribution of Age Group*

<table>
<thead>
<tr>
<th>Age Group</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-29 years</td>
<td>218</td>
<td>54.2</td>
</tr>
<tr>
<td>30-39 years</td>
<td>150</td>
<td>37.3</td>
</tr>
<tr>
<td>40-49 years</td>
<td>32</td>
<td>8.0</td>
</tr>
<tr>
<td>49+ years</td>
<td>2</td>
<td>0.5</td>
</tr>
</tbody>
</table>

*N=402*

Table 11 presents the frequency distribution of participants by college. Participants in the College of Arts and Sciences accounted for 47.5% and Engineering, 52.5%. The data in Table 11 reveal that the college of Engineering (52.5%) received more participants than the College of Arts and Sciences (47.5%).

Table 11

*Frequency Distribution of Participants by College*

<table>
<thead>
<tr>
<th>Colleges</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts &amp; Sciences</td>
<td>191</td>
<td>47.5</td>
</tr>
<tr>
<td>Engineering</td>
<td>211</td>
<td>52.5</td>
</tr>
</tbody>
</table>

*N=402*

Table 12 presents the frequency distribution of participants by gender. Male participants accounted for 63.2% and female, 36.8%.
Table 12

*Frequency Distribution of Participants by Gender*

<table>
<thead>
<tr>
<th>Gender</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>254</td>
<td>63.2</td>
</tr>
<tr>
<td>Female</td>
<td>148</td>
<td>36.8</td>
</tr>
</tbody>
</table>

*N=402*

Table 13 presents the frequency distribution of participants by continent of birth. As seen in Table 13, the frequency distributions of continent of birth are Africa, 11.4%; Asia, 49.3%; Europe, 18.4%; and Latin America, 20.9%. On the basis of the data in Table 13, participants from Asia constitute a majority with a percentage of 49.3%, which is almost half of the total population. Latin America follows with 20.9%; Europe, 18.4%; and Africa, 11.4%.

Table 13

*Frequency Distribution of Participants by Continent of Birth*

<table>
<thead>
<tr>
<th>Continent of Birth</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td>198</td>
<td>49.3</td>
</tr>
<tr>
<td>Latin America</td>
<td>84</td>
<td>20.9</td>
</tr>
<tr>
<td>Europe</td>
<td>74</td>
<td>18.4</td>
</tr>
<tr>
<td>Africa</td>
<td>46</td>
<td>11.4</td>
</tr>
</tbody>
</table>

*N=402*
Table 14 displays the frequency distribution of participants by number of semesters. Participants were asked to indicate the number of semesters they have taken course(s) at the University of South Florida.

As seen in Table 14, the percentage response for participants by number of semesters is as follows: one semester, 0.5%; two semesters, 12.2%; three semesters, 25.9%; four semesters, 16.9%; five semesters, 17.7%; six semesters, 12.2%; seven semesters, 6.5%; eight semesters, 6.0%; and nine semesters, 2.2%. The data in Table 14 demonstrate that the majority of the participants took courses between two to six semesters.

Table 14

*Frequency Distribution of Participants by Number of Semesters*

<table>
<thead>
<tr>
<th>Number of Semesters</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>0.5</td>
</tr>
<tr>
<td>2</td>
<td>49</td>
<td>12.2</td>
</tr>
<tr>
<td>3</td>
<td>104</td>
<td>25.9</td>
</tr>
<tr>
<td>4</td>
<td>68</td>
<td>16.9</td>
</tr>
<tr>
<td>5</td>
<td>71</td>
<td>17.7</td>
</tr>
<tr>
<td>6</td>
<td>49</td>
<td>12.2</td>
</tr>
<tr>
<td>7</td>
<td>26</td>
<td>6.5</td>
</tr>
<tr>
<td>8</td>
<td>24</td>
<td>6.0</td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>2.2</td>
</tr>
</tbody>
</table>

N=402

Table 15 displays the frequency distribution of participants by number of years. Participants who had been in the United States for one year received 24.6%; two years
23.6%; three years, 18.9%; four years, 10.7%; five years, 5.0%; six years, 3.2%; seven years, 6.2%; eight years, 4.0%; and nine years, 3.7%.

As seen in Table 15, most of the participants have been in the United States from one to four years. The results in Table 15 show that participants who have been in the United States for one year accounted for the highest percentage of 24.6% followed by two years, 23.6%; three years, 18.9%; and 10.7% for four years.

Table 15

*Frequency Distribution of Participants by Number of Years*

<table>
<thead>
<tr>
<th>Number of Years</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>99</td>
<td>24.6</td>
</tr>
<tr>
<td>2</td>
<td>95</td>
<td>23.6</td>
</tr>
<tr>
<td>3</td>
<td>76</td>
<td>18.9</td>
</tr>
<tr>
<td>4</td>
<td>43</td>
<td>10.7</td>
</tr>
<tr>
<td>5</td>
<td>20</td>
<td>5.0</td>
</tr>
<tr>
<td>6</td>
<td>13</td>
<td>3.2</td>
</tr>
<tr>
<td>7</td>
<td>25</td>
<td>6.2</td>
</tr>
<tr>
<td>8</td>
<td>16</td>
<td>4.0</td>
</tr>
<tr>
<td>9</td>
<td>15</td>
<td>3.7</td>
</tr>
</tbody>
</table>

\(N=402\)

Of the 38 participants who agreed to volunteer for the follow-up interviews as evidenced in the interview sign-up form, nine participants, including three from Asia, three from Latin America, two from Europe, and one from Africa were selected by stratified random sampling across gender, college, and continent of birth.

The follow-up interviews helped to expand on the results of the quantitative phase of the study. Because the percentage of male participants was greater than females,
participants for the follow-up interviews were stratified to reflect equivalent percentages. Both the quantitative and qualitative phases of the study were analyzed from the data collected to answer the research questions.

**Discussion of Findings**

**Research Question One.** The first research question considered for this study was, “What are the factors that promote transformative learning experiences of international graduate-level learners?” Participants used check boxes to indicate factors that promote transformative learning experiences in the survey.

Descriptive responses of the quantitative part of the survey and follow-up interviews were used to tabulate the results about factors that promote transformative learning experiences of international graduate-level learners. The data were coded from the survey questions 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, and 14. Additionally, Pearson chi-square tests were used to investigate the relationship between educational factors (PT-Index 3), non-educational factors (PT-Index 2), and transformative learning experiences of international graduate-level learners. The educational factors (PT-Index 3) considered in this study were critical thinking, classroom discussion, mentoring, personal self-reflection, assigned readings, class projects, term papers/essays, laboratory experiences, and other. The non-educational factors (PT-Index 2) were marriage, moving/relocation, loss of job, change of job, death of a loved one, divorce/separation, learning new culture, and other.

A scale of “PT-Index” (Perspective Transformation Index) was used to determine how international graduate-level learners encountered transformative learning as a result of their educational and non-educational experiences. The score for each participant was
based on a scale of one to three. Experienced transformative learning associated with education, participants are scored “3” (PT-Index 3). Experienced transformative learning associated with non-education (PT-Index 2) they received a score of “2” and participant did not experience any form of transformative learning, they received a score “1” (PT-Index 1). In this study, participants who experienced transformative learning as a result of both educational and non-educational experiences were coded as (the combined PT-Index 2 and 3) respectively. With regards to question two, 79.6% of the participants (n=320) reported experienced transformative learning while 20.4% (n=82) reported that they did not experience any form of transformative learning. The proportion of participants who experienced and those who did not transformative learning were as follows 32.3% of the participants experienced transformative learning associated with educational experience only, 17.9% by non-educational experience only, and 29.4% by both educational and non-educational experiences.

Table 16 shows the frequency distribution of participants who experienced transformative learning in response to question four (who influenced your change). The percentage responses for participants were advisor’s support, 71.3%; teacher’s support, 65.6%; challenge from your teacher, 63.7%; classmates’ support 60.9%; another student’s support, 60.3%; and others, 41.9%.

The major influences on change for those students who experienced transformative learning associated with both educational and non-educational were advisor’s and teacher’s support and challenge from their teachers as people who influenced the change as part of their experience at the University of South Florida.
Table 16

*Frequency Distribution of Participants Response to Question 4 (person who influenced change)*

<table>
<thead>
<tr>
<th>Response to Question 4</th>
<th>$n$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advisor’s Support</td>
<td>228</td>
<td>71.3</td>
</tr>
<tr>
<td>Teacher’s Support</td>
<td>210</td>
<td>65.6</td>
</tr>
<tr>
<td>Challenge from Teachers</td>
<td>204</td>
<td>63.7</td>
</tr>
<tr>
<td>Classmates’ Support</td>
<td>195</td>
<td>60.9</td>
</tr>
<tr>
<td>Another Student’s Support</td>
<td>193</td>
<td>60.3</td>
</tr>
<tr>
<td>Other</td>
<td>134</td>
<td>41.9</td>
</tr>
</tbody>
</table>

$n = 320$

Table 17 illustrates the frequency distribution of responses by international graduate-level learners who experienced transformative learning associated with educational factors. The percentage response for participants by educational factors (PT-Index 3) were assigned readings, 85.1%; class projects, 84.3%; term papers/essay, 83.9%; mentoring, 83.5%; classroom discussion 81.5%; personal self-reflection, 78.6%; critical thinking, 77.8%; laboratory experiences, 75.4%; and other, 38.3%.

The major educational factors that influenced participants to experience transformative learning included classroom activities such as assigned readings, class projects, and term papers/essays. Also mentoring was an influential factor.
Table 17

*Frequency Distribution of Educational Factors*

<table>
<thead>
<tr>
<th>Educational Factors</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assigned Readings</td>
<td>211</td>
<td>85.1</td>
</tr>
<tr>
<td>Class Projects</td>
<td>209</td>
<td>84.3</td>
</tr>
<tr>
<td>Term Papers/Essays</td>
<td>208</td>
<td>83.9</td>
</tr>
<tr>
<td>Mentoring</td>
<td>207</td>
<td>83.5</td>
</tr>
<tr>
<td>Classroom Discussion</td>
<td>202</td>
<td>81.5</td>
</tr>
<tr>
<td>Personal Reflection</td>
<td>195</td>
<td>78.6</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>193</td>
<td>77.8</td>
</tr>
<tr>
<td>Lab Experiences</td>
<td>187</td>
<td>75.4</td>
</tr>
<tr>
<td>Other</td>
<td>153</td>
<td>38.3</td>
</tr>
</tbody>
</table>

\(n=248\)

Table 18 displays the frequency distribution of responses by international graduate-level learners who experienced transformative learning associated with non-educational factors. The percentage responses were moving/relocation, 94.7%; loss of job, 92.6%; learning new culture, 91.6%; change of job, 85.8%; marriage, 81.6%; divorce/separation, 81.1%; death of a loved one, 76.8%; and other 20.5%.

The results in Table 18 show that moving/relocation, learning new culture, loss or change of job were reported as the non-educational influence of participants transformative learning.
Table 18. Frequency Distribution of Non-Educational Factors

<table>
<thead>
<tr>
<th>Non-Educational Factors</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moving/Relocation</td>
<td>180</td>
<td>94.7</td>
</tr>
<tr>
<td>Loss of Job</td>
<td>176</td>
<td>92.6</td>
</tr>
<tr>
<td>Learning New Cultures</td>
<td>174</td>
<td>91.6</td>
</tr>
<tr>
<td>Change of Job</td>
<td>163</td>
<td>85.8</td>
</tr>
<tr>
<td>Marriage</td>
<td>155</td>
<td>81.6</td>
</tr>
<tr>
<td>Divorce/Separation</td>
<td>154</td>
<td>81.1</td>
</tr>
<tr>
<td>Death of a loved one</td>
<td>146</td>
<td>76.8</td>
</tr>
<tr>
<td>Other</td>
<td>39</td>
<td>20.5</td>
</tr>
</tbody>
</table>

n = 190

In regards to survey questions 8 and 9. Of the total 402 participants, 80.6% and 19.4% responded “Yes” and “No” respectively to question 8 (would you characterize yourself as one who usually reflects over previous decisions or past behavior?). With regards to question 9 (would you say that you frequently reflect upon the meaning and application of your studies for yourself, personally?), 81.3% and 18.7% of the participants responded “Yes” and “No” respectively.

All of the participants including those who reported experienced transformative learning or not, responded to question 10 as part of their experiences at the University of South Florida. Since those who reported transformative learning have been already analyzed, those international graduate-level learners who did not report transformative learning were extracted from the larger data and their responses were more specifically reviewed. Table 19 shows the frequency distribution of responses to question 10 by participants who did not experience transformative learning (PT-Index 1). The percentage response for participants by educational factors were assigned reading, 86.6%;
class projects, 80.5%; mentoring, 79.3%; critical thinking, 76.8%; term papers/essays, 75.6%; classroom discussion, 74.4%; lab experiences, 69.5%; personal self-reflection, 74.4%; and other, 36.6%.

Table 19

*Frequency and Percentages of Participants Response to Question 10 by Those Not Reporting Transformative Learning*

<table>
<thead>
<tr>
<th>Educational Factors</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assigned Readings</td>
<td>71</td>
<td>86.6</td>
</tr>
<tr>
<td>Class Projects</td>
<td>66</td>
<td>80.5</td>
</tr>
<tr>
<td>Mentoring</td>
<td>65</td>
<td>79.3</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>63</td>
<td>76.8</td>
</tr>
<tr>
<td>Term Papers/Essays</td>
<td>62</td>
<td>75.6</td>
</tr>
<tr>
<td>Classroom Discussion</td>
<td>61</td>
<td>74.4</td>
</tr>
<tr>
<td>Lab Experiences</td>
<td>61</td>
<td>74.4</td>
</tr>
<tr>
<td>Personal Self-Reflection</td>
<td>57</td>
<td>69.5</td>
</tr>
<tr>
<td>Other</td>
<td>30</td>
<td>36.6</td>
</tr>
</tbody>
</table>

*n=82*

Table 20 displays the frequency distribution of responses to question 11 (Which of the following occurred while taking classes at USF?) for non-educational factors by participants who did not experience transformative learning (PT-Index 1). The percentage responses for each category were: learn new culture, 95.1%; moving/relocation, 90.2%; loss of job, 90.0%; change of job, 84.1%; death of a loved one, 79.3%; marriage, 76.8%; divorce/separation, 75.6%; and other 23.2%.
The results in Table 20 show that non-educational factors including learning new culture, moving/relocation, loss or change of job had the highest percentages of responses by participants who did not experience transformative learning.

Table 20

*Frequency and Percentages of Participants Responding to Question 11 by Those Not Reporting Transformative Learning*

<table>
<thead>
<tr>
<th>Non-Educational Factors</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn New Cultures</td>
<td>78</td>
<td>95.1</td>
</tr>
<tr>
<td>Moving/Relocation</td>
<td>74</td>
<td>90.2</td>
</tr>
<tr>
<td>Loss of Job</td>
<td>73</td>
<td>90.0</td>
</tr>
<tr>
<td>Change of Job</td>
<td>69</td>
<td>84.1</td>
</tr>
<tr>
<td>Death of a Loved One</td>
<td>65</td>
<td>79.3</td>
</tr>
<tr>
<td>Marriage</td>
<td>63</td>
<td>76.8</td>
</tr>
<tr>
<td>Divorce/Separation</td>
<td>62</td>
<td>75.6</td>
</tr>
<tr>
<td>Other</td>
<td>19</td>
<td>23.2</td>
</tr>
</tbody>
</table>

*n=82*

Additionally, in question 12, participants were given the opportunity to choose only one factor from the list of educational and non-educational factors as well as persons that mostly influenced them to experience transformative learning. Table 21 illustrates the frequency distribution of responses for individual persons who influenced the change of international graduate-level learners. The percentages were advisor’s support, 29.1%; teacher’s support, 21.4%; classmates’ support, 17.2%; challenge from teacher, 15.3%; another student’s support, 13.9%; and others, 3.1%. According to the data in Table 21 the major influences about the single most important person for those who experienced
and did not experience transformative learning were advisors’, teachers’, and classmates’ support.

Table 21
*Frequency Distribution of Response to Question 12 For Those Identifying the Single Most Important Person*

<table>
<thead>
<tr>
<th>Most Important Person</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advisor’s Support</td>
<td>117</td>
<td>29.1</td>
</tr>
<tr>
<td>Teacher’s Support</td>
<td>86</td>
<td>21.4</td>
</tr>
<tr>
<td>Classmates’ Support</td>
<td>70</td>
<td>17.2</td>
</tr>
<tr>
<td>Challenge from Teachers</td>
<td>62</td>
<td>15.3</td>
</tr>
<tr>
<td>Another Student’s Support</td>
<td>54</td>
<td>13.3</td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
<td>3.1</td>
</tr>
</tbody>
</table>

*N=402

Table 22 displays the frequency distribution of responses for educational factors by international graduate-level learners. The percentages were mentoring, 19.7%; critical thinking, 15.7%; classroom discussion at 15.2%; personal self-reflection, 10.7%; class projects, 6.5%; term papers/essay, 5.7%; assigned readings, 4.0%; lab experiences, 3.7%; and other, 18.9%. With regards to other factors, participants were given the option to specify other factors that influenced them to experience transformative learning. The majority of the participants indicated school environment (11.7%) and English language acquisition (7.2%).
Table 22

*Frequency Distribution of Specific Educational Factors Reported as Being Most Influential*

<table>
<thead>
<tr>
<th>Educational Factors</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentoring</td>
<td>79</td>
<td>19.7</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>63</td>
<td>15.2</td>
</tr>
<tr>
<td>Classroom Discussion</td>
<td>61</td>
<td>15.2</td>
</tr>
<tr>
<td>Personal Self-Reflection</td>
<td>43</td>
<td>10.6</td>
</tr>
<tr>
<td>Class Projects</td>
<td>26</td>
<td>6.5</td>
</tr>
<tr>
<td>Term Papers/Essays</td>
<td>23</td>
<td>5.7</td>
</tr>
<tr>
<td>Assigned Readings</td>
<td>16</td>
<td>4.0</td>
</tr>
<tr>
<td>Lab Experience</td>
<td>15</td>
<td>3.7</td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Environment</td>
<td>47</td>
<td>11.6</td>
</tr>
<tr>
<td>Language Acquisition</td>
<td>29</td>
<td>7.2</td>
</tr>
</tbody>
</table>

N=402

Table 23 displays the frequency distribution of responses for non-educational factors by international graduate-level learners. The percentages were marriage, 5.2%; moving/relocation, 37.1%; change of job, 12.9%; loss of job, 8.2%; divorce/separation, 4.0%; death of a loved one, 4.2%; learn new culture, 20.4%; and other 8.0%. The result in Table 23 shows that moving/relocation, learning new culture, loss or change of job were the single most important non-educational factors.
Table 23

*Frequency Distribution of Specific Non-Educational Factors Identified as Being Most Influential*

<table>
<thead>
<tr>
<th>Non-Educational Factors</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moving/Relocation</td>
<td>149</td>
<td>37.1</td>
</tr>
<tr>
<td>Learning New Culture</td>
<td>82</td>
<td>20.4</td>
</tr>
<tr>
<td>Change of Job</td>
<td>52</td>
<td>12.9</td>
</tr>
<tr>
<td>Loss of Job</td>
<td>33</td>
<td>8.2</td>
</tr>
<tr>
<td>Marriage</td>
<td>21</td>
<td>5.2</td>
</tr>
<tr>
<td>Death of a Loved One</td>
<td>17</td>
<td>4.2</td>
</tr>
<tr>
<td>Divorce/Separation</td>
<td>16</td>
<td>4.0</td>
</tr>
<tr>
<td>Other</td>
<td>32</td>
<td>8.0</td>
</tr>
</tbody>
</table>

N=402

A scale of “PT-Index” (Perspective Transformation Index) was used to determine how international graduate-level learners encountered transformative learning associated with their educational and non-educational experiences. The score for each participant was based on a scale of one to three. Experienced transformative learning associated with education, participants are scored “3” (PT-Index 3). Experienced transformative learning associated with non-education participants are scored “2” (PT-Index 2) and participant did not experience transformative learning, they received a score of “1” (PT-Index 1). In this study, participants who experienced transformative learning as a result of both education and non-education factors were scored as (combined PT-Index 2 and 3). As shown in Table 24, Pearson chi-square tests were used to investigate the relationship between educational factors (i.e., critical thinking, classroom discussion, mentoring, personal self-reflection, class projects, term papers/essays, assigned readings,
other) and the reported transformative learning experiences of international graduate-level learners. The score for each participant was based on participants who experienced transformative learning associated with educational factors only. The breakdown of responses by the two indicators of transformative learning experiences identified as PT-Index (Perspective Transformative) 3 and the combined PT-Index 2 and 3 is summarized in Table 24. A test of association showed that there was statistically significant relationship between assigned readings and transformative learning experiences of international graduate-level learners evidenced by a $p$-value of 0.008 and a relatively small effect size (Cohen’s $\omega = 0.168$). According to the data in Table 24, educational factors (i.e., critical thinking, classroom discussion, mentoring, personal reflection, class projects, term papers, laboratory experiences, and other) were not statistically significant associated with transformative learning experiences of international graduate-level learners, $\chi^2(1) = 0.441, p = 0.507, \chi^2(1) = 0.892, p = 0.345, \chi^2(1) = 0.028 p = 0.866, \chi^2(1) = 0.745, p = 0.388, \chi^2(1) = 0.797, p = 0.372, \chi^2(1) = 0.021, p = 0.738, \chi^2(1) = 0.112, p = 0.078,$ and $\chi^2(1) = 0.332, p = 0.565$ respectively. As seen in Table 24, most international graduate-level learners who experienced transformative learning associated with education (PT-Index 3) frequently identified assigned readings (90.8%) followed by term papers (84.6%), mentoring (83.8%), personal reflection (80.8%), laboratory experiences (80.0%), and others (40.0%) while those who experienced transformative learning as a result of both education and non-education (the combined PT-Index 2 and 3) most commonly identified class projects (86.9%) followed by classroom discussion (83.9%), and critical thinking (79.7%).
Table 24
Crosstabulation of Responses by Participants Reporting Educational Transformative Learning Experiences

<table>
<thead>
<tr>
<th>Education Factor/Response</th>
<th>Transformative Learning Experiences</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PT-Index 3(^a)</td>
<td>PT-Index 2 and 3(^b)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>(\chi^2)</td>
<td>W</td>
<td>p-value</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>99</td>
<td>76.2</td>
<td>94</td>
<td>79.7</td>
<td>0.441</td>
<td>0.042</td>
<td>0.507</td>
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<td>31</td>
<td>23.8</td>
<td>24</td>
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<td></td>
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<tr>
<td>Classroom Discussion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>103</td>
<td>79.2</td>
<td>99</td>
<td>83.9</td>
<td>0.892</td>
<td>0.060</td>
<td>0.345</td>
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<td>19</td>
<td>16.1</td>
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<tr>
<td>Mentoring</td>
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<tr>
<td>Yes</td>
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<td>83.8</td>
<td>98</td>
<td>83.1</td>
<td>0.028</td>
<td>0.011</td>
<td>0.866</td>
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<td>16.2</td>
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<tr>
<td>Personal Reflection</td>
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<td>Yes</td>
<td>105</td>
<td>80.8</td>
<td>90</td>
<td>76.3</td>
<td>0.745</td>
<td>0.055</td>
<td>0.388</td>
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<td>Class Projects</td>
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<td>Yes</td>
<td>107</td>
<td>82.3</td>
<td>102</td>
<td>86.4</td>
<td>0.797</td>
<td>0.057</td>
<td>0.372</td>
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<td>17.7</td>
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<td>13.6</td>
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<td></td>
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<tr>
<td>Term Papers</td>
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<td></td>
</tr>
<tr>
<td>Yes</td>
<td>110</td>
<td>84.6</td>
<td>98</td>
<td>83.1</td>
<td>0.112</td>
<td>0.021</td>
<td>0.738</td>
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<td>15.4</td>
<td>20</td>
<td>16.9</td>
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<tr>
<td>Assigned Readings</td>
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<tr>
<td>Yes</td>
<td>118</td>
<td>90.8</td>
<td>93</td>
<td>78.8</td>
<td>6.965</td>
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<td>0.008</td>
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<td>9.2</td>
<td>25</td>
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<td></td>
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<tr>
<td>Lab Experiences</td>
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<tr>
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<td>104</td>
<td>80.0</td>
<td>83</td>
<td>70.3</td>
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<td>0.112</td>
<td>0.078</td>
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<td>20.0</td>
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<td>29.7</td>
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<tr>
<td>Other</td>
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<tr>
<td>Yes</td>
<td>52</td>
<td>40.0</td>
<td>43</td>
<td>36.4</td>
<td>0.332</td>
<td>0.037</td>
<td>0.565</td>
</tr>
<tr>
<td>No</td>
<td>78</td>
<td>60.0</td>
<td>75</td>
<td>63.6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(n=248\)

\(\omega=\text{effect size}\)

\(^a\)PT-Index 3 = Experience transformative learning associated with education only

\(^b\)PT-Index 2 and 3 = Experience transformative learning associated with both education and non-education factors
A scale of “PT-Index” (Perspective Transformation Index) was used to determine how international graduate-level learners encountered transformative learning associated with their educational and non-educational experiences.

The score for each participant was based on a scale of one to three. Experienced transformative learning associated with education, participants are scored “3” (PT-Index 3). Experienced transformative learning associated with non-education participants are scored “2” (PT-Index 2) and participant did not experience transformative learning, they received a score of “1” (PT-Index 1). In this study, participants who experienced transformative learning as a result of both education and non-education factors were scored as (combined PT-Index 2 and 3).

Table 25 presents crosstabulation of responses for non-educational factors including marriage, moving/relocation, change of job, loss of job, divorce/separation, death of a loved one, learning new culture, other, and the reported transformative learning experiences of international graduate-level learners. The score for each participant was based on participants who experienced transformative learning by non-educational factors only. Pearson chi-square test was used to analyze the information in the table. A breakdown of responses by the indicators of transformative learning experiences identified as PT-Index 2, the combined PT-Index 2 and 3 is summarized in Table 25.

The information in Table 25 shows that all non-educational factors namely marriage, moving/relocation, change of job, loss of job, divorce/separation, death of a loved one, learning new culture, and other were not statistically significant, $\chi^2(1) = 1.714, p = 0.191, \chi^2(1) = 1.077, p = 0.299, \chi^2(1) = 0.414, p = 0.520, \chi^2(1) = 1.438, p = 0.230,$
\( \chi^2(1) = 0.014, p = 0.906, \chi^2(1) = 0.034, p = 0.853, \chi^2(1) = 0.806, p = 0.369, \) and \( \chi^2(1) = 0.009, p = 0.026 \) respectively.

Moving/relocation was most frequently identified by students with the combined PT-Index of 2 and 3 (96.6%) followed by those with a PT-Index of 3 (91.4%). A test of association revealed that there was no statistically significant association between moving/relocation and transformative learning experiences of international graduate-level learners with a \( p \)-value of 0.139 and a relatively small effect size (Cohen’s \( \omega = 0.107 \)).

Loss of job was most commonly identified by students with a PT-Index of 2 and 3 (94.1%) followed by those with a PT-Index of 3 (90.3%). Chi-square test indicates that there was no statistically significant association between loss of job and transformative learning experiences of international graduate-level learners with a \( p \)-value of 0.332 and a relatively small effect size (Cohen’s \( \omega = 0.070 \)).

According to the information in Table 25, the majority of the international graduate-level learners who experienced transformative learning associated with non-education only (PT-Index 2) mostly identified marriage (81.9%) while those who experienced transformative learning associated with both educational and non-educational factors (the combined PT-Index 2 and 3) most frequently identified moving/relocation (96.6%) followed by loss of job (94.1%), learning new culture (92.4%), change of job (88.1%), divorce/separation (82.2%), death of a loved one (77.1%), and other (21.2%).
Table 25

*Crosstabulation of Responses by Participants Reporting Non-Educational Transformative Learning Experiences*

<table>
<thead>
<tr>
<th>Non-Education Factor/ Factor</th>
<th>PT-Index 2&lt;sup&gt;a&lt;/sup&gt; Transformative Learning Experiences</th>
<th>PT-Index 2 and 3&lt;sup&gt;b&lt;/sup&gt;</th>
<th>χ²</th>
<th>ϕ</th>
<th>p-value</th>
</tr>
</thead>
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<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marriage</td>
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</tr>
<tr>
<td>Yes</td>
<td>59</td>
<td>81.9</td>
<td>96</td>
<td>81.4</td>
<td>0.010</td>
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<tr>
<td>No</td>
<td>13</td>
<td>18.1</td>
<td>22</td>
<td>18.6</td>
<td></td>
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<tr>
<td>Moving/Relocation</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
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<td>91.4</td>
<td>4</td>
<td>96.6</td>
<td>2.192</td>
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<td>8.3</td>
<td>114</td>
<td>3.4</td>
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<tr>
<td>Change of Job</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
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<td>81.9</td>
<td>104</td>
<td>88.1</td>
<td>1.406</td>
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<td>14</td>
<td>11.9</td>
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<tr>
<td>Loss of Job</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Yes</td>
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<td>90.3</td>
<td>111</td>
<td>94.1</td>
<td>0.941</td>
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<td>9.7</td>
<td>7</td>
<td>5.9</td>
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<tr>
<td>Death of a Loved One</td>
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<tr>
<td>Yes</td>
<td>55</td>
<td>76.4</td>
<td>91</td>
<td>77.1</td>
<td>0.013</td>
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<tr>
<td>No</td>
<td>17</td>
<td>23.6</td>
<td>27</td>
<td>22.9</td>
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<tr>
<td>Learning New Culture</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>65</td>
<td>90.3</td>
<td>109</td>
<td>92.4</td>
<td>0.255</td>
</tr>
<tr>
<td>No</td>
<td>7</td>
<td>9.7</td>
<td>9</td>
<td>7.6</td>
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<tr>
<td>Divorce/Separation</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>57</td>
<td>79.2</td>
<td>97</td>
<td>82.2</td>
<td>0.269</td>
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<td>17.8</td>
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<tr>
<td>Others</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>14</td>
<td>19.4</td>
<td>93</td>
<td>21.2</td>
<td>0.083</td>
</tr>
<tr>
<td>No</td>
<td>58</td>
<td>80.6</td>
<td>25</td>
<td>78.8</td>
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</tr>
</tbody>
</table>

n=190

ϕ=effect size

<sup>a</sup>PT-Index 2 = Experience transformative learning associated with non-education only

<sup>b</sup>PT-Index 2 and 3 = Experience transformative learning associated with both education and non-education factors
Follow-up Interviews

The purpose of the follow-up interview was to expand the results of the quantitative phase and provide greater depth of information. Of the 38 participants who volunteered to be interviewed as evidenced in the interview sign-up form, nine were selected by stratified random sampling across gender, continent of birth, and college. Because the percentage representation of male participants was greater than that for females, participants for the follow-up interviews were stratified to reflect balanced percentages.

Atlas .ti software was used to analyze that data for the follow-up interview transcripts. The researcher read through all interview transcripts (data) and wrote memos. Categories and responses were coded with assigned labels. Codes were used to generate categories and themes by aggregating similar codes together. A peer reviewer read through all the data and coded segments into categories and themes. The researcher used research questions from this study as the framework for analyzing data.

A second coder also reviewed data and identified major categories and themes based on the research questions posed for this study. This helped to determine the accuracy of the identified categories and themes. Member checking helped in the triangulation of the coding and analysis of the data. Comparisons were made from the data to make sure it was consistent with the text from the interviews and examined which findings was supported by the literature review. The major themes that emerged from the follow-up interviews were support from faculty, classroom discussions, introduction to new environment, and learning new language. Most of the participants explained that the
support they received from their professors helped them to transition successfully into the academic and social environment.

As international graduate students, they were in new environments and need to learn to cope with all the challenges faced as well as use the opportunities available to them. They need the guidance and support from their faculty on how to conduct research, use technology and understand the academic and social events in their new schools.

The majority of the international graduate-level learners had not experienced living and doing academic work outside their respective countries of origin. One participant from Asia commented, my advisor helped me on a lot of things such as how to study, planning for research work, conference presentations, and leadership skills. This was a great transformational learning for me. According to Daloz (1999), faculty mentoring is an important step in helping adult learners in their perspective transformative learning. It is a powerful instrument on the journey to transformation. Another participant stated,

My advisor has been a huge support for me. We meet regularly at least once a week to discuss issues concerning academic and research work such as guiding me on what to do, discuss laboratory results, and preparation for journal writing. I never got this opportunity as an undergraduate student in Venezuela. That was a great transformational learning experience.

Brookfield (1986), states that the mentor must provide safety, trust, respect, and codes of conduct to encourage support and transformative learning. Classroom Discussion was another major theme that influenced participants to experience transformative learning. Most of the interviewees acknowledged that they had to learn how to adapt to the teaching and learning styles upon their arrival in the United States.
The classroom and social life on campus was completely different from what they were used to in their countries of origin. They emphasized the importance of classroom discussions as a way to understand and contribute to knowledge. A participant stated that, various classroom discussions had positive influence on me as a foreign graduate student. Discussing concepts with colleagues and professors influenced me to compare my past life experiences in China and present social life in the United States. Another participant commented that, “classroom discussions helped me to understand concepts and adapt to the learning styles here. I had the chance to discuss many papers with other students. My perspective about evolution changed. It’s a terrific example to change values and expectations.” As indicated in the literature review by King (2000), class discussions provide an enabling environment for adult learners in higher education to experience perspective transformation as they get the opportunities to share ideas based on their individual background experiences. A participant from Europe acknowledged,

The classroom atmosphere is different and free, you can talk, present your ideas freely even without raising your hand. The knowledge within this kind of open communication helped me to understand different ideas and perspectives. In my country, students only listen throughout the class, keep your questions, due to this differences, I think classroom discussion has changed my perspectives.

As referenced in the literature by King (2005), dialogue is another critical component of creating transformative learning opportunities among adult learners in higher education. One interviewee stated,

What I have observed at USF is that, the professors here are very kind and give points on class participation and that encourages you to pay attention and contributes to class discussion and since this was new to me, it totally changed my attitude and beliefs in education. The majority of the participants agreed that learning new culture in the United States allowed them experience a metamorphosis of personal change. This personal
change conflicted with their personalities prior to the change. They were in constant struggle with their old values, beliefs, and assumptions. One interviewee stated,

In India, most married women live in compound houses with the husband’s family. It is the responsibility of the wife to respect most decisions of the husband’s family. After coming here, I have learned how to say no and disagree with other issues. I have found my individual freedom. In the beginning, I was hesitant to speak my mind but now it is like a self-transformation of the mind and self thought. This has changed my personality.

According to Mezirow (1997), in the course of the adult learner’s journey to seek values and assumptions, they begin to examine those habits of mind as they engage in discourse with one another. A female participant from Indonesia said,

The culture in the US was very new to me and was always got caught up with new things that I had to learn. It was hard for me to lose my values especially being a Muslim woman. The process of learning new culture forced me to re-evaluate my beliefs and expectations consistently.

According to Preece (2004), transformational learning occurs when the adult learners are able to develop self or awareness from previous knowledge and question assumptions or reality of an issue. Mezirow (2000) states that in the adult learner’s journey to experience transformative learning, they interpret experiences critically, examine the assumptions and beliefs that have structured how those experiences have been interpreted, and revise personal assumptions until the structure of previous assumptions has been transformed. One interviewee commented,

In Pakistan, social life is male dominated. Since moving to the US I have been emancipated about my abilities as a woman by learning the cultures. I don’t see my self any more as a second-class citizen to any man. It didn’t bother me when I was living there but now I’m very concerned about it. It’s been a rapid transformational experience.

According to King (2000), transformative learning could occur through phases of fear and uncertainty, testing and exploring, affirming and connecting, and new
perspectives. These phases are consistent with the fundamental understanding of the needs of adult learners. Learning a new language was the last major theme that emerged from the follow-up interviews. Most of the participants confirmed that their knowledge of learning a new language provided them new opportunities to advance their academic endeavors. It also offered them the opportunity to integrate into campus and classroom environments with confidence and independence. A participant acknowledged, “I had to learn how to speak English in order to adapt to the cultures. This completely changed my perspective and beliefs.” Another participant commented,

It was very hard for me in the beginning when I got here. I had to learn how to read and write English. It was like I will talk to people and they will ask me the same thing again. Learning English language was like going through another life cycle.

As indicated in the literature review, King (2000) concluded in a study that adult ESL learners experience perspective transformation in their frame of reference, prior thinking about cultures, and language learning. An interviewee stated,

English language acquisition was a big problem for me when I first moved here. Sometimes you get frustrated. For instance, in my first semester at USF I had to record all my classes and listen to it when I go back home. I struggled to adjust with life in the United States. Today, I share my past experience to other colleagues about my transformational journey in English language acquisition.

According to King (2005), the journey to transformative learning is not usually strictly linear; it may have many twists, turns, stops, delays, and even re-routing along the way. Adult learners may experience dramatic changes in their professional perspectives when they progress through foundational courses for their future or current profession (King, 1998). The follow-up interviews offered additional data to support the results of the quantitative phase of this study.
Results from the quantitative phase revealed that there was a significant association between assigned readings (educational factor) and transformative learning experiences of international graduate-level learners. However, there was no significant association between non-educational factors and transformative learning experiences of international graduate-level learners. In the qualitative phase, support from faculty, classroom discussions, introduction to a new environment, and learning a new language emerged as the major themes that facilitate transformative learning experiences of international graduate-level learners. Integration of the two data sets conclude that educational factors namely assigned readings and new life experiences (i.e., support from faculty, classroom discussions, introduction to new environment, and learning new language) mostly influenced international graduate-level learners as part of their educational and non-educational experiences at University of South Florida.

**Research Question Two.** The second research question for this study was “What proportion of international graduate-level learners appear to have had transformative learning experiences?” This research question provides the percentage distribution for participants who experienced transformative learning and those who did not experience transformative learning in any form by gender, age group, continent of birth, number of years, and college.

Table 26 displays the total percentage distribution of participants who experienced transformative learning and those who did not experience transformative learning. Overall, 79.6% of the participants reported that they had experienced transformative learning whereas 20.4% reported that they did not experience any form of transformative learning.
Table 26

*Percentage Response of Participants Who Experienced Transformative Learning and Those Who Did Not Experience Transformative Learning*

<table>
<thead>
<tr>
<th>Transformative Learning</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experienced transformative learning</td>
<td>320</td>
<td>79.6</td>
</tr>
<tr>
<td>Did not experience transformative learning</td>
<td>82</td>
<td>20.4</td>
</tr>
</tbody>
</table>

N=402

Table 27 shows the total percentage distribution of participants who experienced transformative learning and those who did not experience transformative learning. Overall, 79.6% of the participants reported that they had experienced transformative learning while 20.4% reported that they had not experienced transformative learning. Among participants who experienced transformative learning, 32.3% of the transformative experiences were associated with education, 29.4% experienced both education and non-education while 17.9% were non-education.

Table 27

*Percentage Response of Participants Who Experienced Transformative Learning by Educational and Non-Educational Factors*

<table>
<thead>
<tr>
<th>Transformative Learning</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experienced transformative learning by education (only)</td>
<td>130</td>
<td>32.3</td>
</tr>
<tr>
<td>Experienced transformative learning by non-education (only)</td>
<td>72</td>
<td>17.9</td>
</tr>
<tr>
<td>Experienced transformative learning by both education and non-education</td>
<td>118</td>
<td>29.4</td>
</tr>
<tr>
<td>Did not experience transformative learning</td>
<td>82</td>
<td>20.4</td>
</tr>
</tbody>
</table>

N=402
These were measured from questions one and two in the survey. Question one stated: “Thinking about your educational experiences at USF, check off any statements that may apply.” Participants who checked the “m” box (“I do not identify with any of the statement above”) indicated that none of the statements in question one applied to them while those who checked any of the boxes in question one and “Yes” in question two indicated they experienced transformative learning. Question two stated: “Since you have been taking courses at USF, do you believe you have experienced a time when you realized that your values, beliefs, opinions, or expectations had changed?” This implied that all participants who checked “Yes” experienced transformative learning (79.6%) and those who checked “No” did not experience any form of transformative learning (20.4%). Table 29 displays the percentage distribution of participants who experienced transformative learning by gender.

As shown in Table 28, the percentage response for males who experienced transformative learning was 79.9% and females, 79.0%. However, based on the results, 20.1% of males and 21.0% of female international graduate-level learners did not experience transformative learning.

Data in Table 28 shows that the percentage response for male participants who experienced transformative learning was higher than females. A test of association showed that there was no statistically significant association between gender and the experiences of transformative learning with a p-value of 0.8351, $\chi^2(1) = 0.043$, $p = 0.8351$ and a relatively small effect size (Cohen’s $\omega = 0.0104$).
Table 28

Percentage Response of Participants Who Experienced Transformative Learning and Those Who Did Not Experience Transformative Learning by Gender

<table>
<thead>
<tr>
<th>Transformative learning</th>
<th>Male</th>
<th>Female</th>
<th>$\chi^2$</th>
<th>$\omega$</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experienced transformative learning</td>
<td>203</td>
<td>117</td>
<td>0.043</td>
<td>0.0104</td>
<td>0.8351</td>
</tr>
<tr>
<td>Did not experience transformative learning</td>
<td>51</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$N=402$, $\omega$=effect size

Table 29 presents the percentage distribution of participants who experienced transformative learning and those who did not experience transformative learning by age group. As seen in Table 29, for participants between 20 and 29 years, 80.2% experienced transformative learning whereas 19.8% did not experience transformative learning. Participants who experienced transformative learning between 30 to 39 years accounted for 78.6% whereas 21.4% did not experience transformative learning experiences. For 40 and 49 years, 78.1% experienced transformative learning, whereas 21.9% did not experience transformative learning. Among 49 years and above, 100% experienced transformative learning whereas 0.0% did not experience transformative learning.

According to the findings in Table 29, participants 49 years and above had the highest percentages of transformative learning experiences (100%), followed by those from 30 and 39 years (80.2%). Chi-square tests show that there was no statistically significant relationship between international graduate-level learners who experienced transformative learning and those who did not experience transformative learning by age group with a $p$-value of 0.873, $\chi^2(3) = 0.697$, $p = 0.873$ and a relatively small effect size (Cohen’s $\omega = 0.041$).
Table 29

*Percentage Response of Participants Who Experienced Transformative Learning and Those Who Did Not Experience Transformative Learning by Age Group*

<table>
<thead>
<tr>
<th>Transformative Learning</th>
<th>Age Group</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20-29 yrs</td>
<td>30-39 yrs</td>
<td>49-49 yrs</td>
<td>49+ yrs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td></td>
</tr>
<tr>
<td>Experienced transformative learning</td>
<td>175</td>
<td>118</td>
<td>25</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>80.2</td>
<td>78.6</td>
<td>78.1</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Did not experience transformative learning</td>
<td>43</td>
<td>32</td>
<td>7</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>19.8</td>
<td>21.4</td>
<td>21.9</td>
<td>0.00</td>
<td></td>
</tr>
</tbody>
</table>

\(N=402\)  \(p\)-value=0.873,  \(w=0.041\),  \(\chi^2=0.697\),  \(\text{yrs} = \text{years}\)

Table 30 presents the percentage distribution of participants who experienced transformative learning and those who did not experience transformative learning by college. Colleges are categorized into Arts and Sciences and Engineering. Among participants in the college of Arts and Sciences, 80.6% experienced transformative learning whereas 19.4% did not experience transformative learning. With regards to college of Engineering, 78.6% of the participants experienced transformative learning whereas 21.4% did not experience transformative learning. As seen in Table 30, chi-square tests show that there was no statistically significant association between students who experienced transformative learning and those who did not experience transformative learning by college with a \(p\)-value of 0.627,  \(\chi^2(1) = 0.236\), \(p = 0.627\) and a relatively small effect size (Cohen’s \(w = 0.024\)).
Table 30

<table>
<thead>
<tr>
<th>Transformative Learning</th>
<th>A &amp; S</th>
<th>Eng</th>
<th>$\chi^2$</th>
<th>$\nu$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experienced transformative learning</td>
<td>154</td>
<td>166</td>
<td>0.236</td>
<td>0.024</td>
</tr>
<tr>
<td>Did not experience transformative learning</td>
<td>37</td>
<td>45</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 31 illustrates the distribution of participants who experienced transformative learning and those who did not experience transformative learning by continent of birth. The percentage response for participants who experienced transformative learning by continent of birth were Africa, 84.7%; Asia, 82.3%; Europe, 74.3%; and Latin America 75.0%. The percentage responses for participants who did not experience transformative learning by continent of birth were Africa, 15.2%; Asia, 17.7%; Europe, 2.7%; and Latin America, 25.0%.

According to the findings in Table 31, Africa had the highest percentage response (84.7%) of students who experienced transformative learning followed by Asia, 82.3%; Latin America, 75.0%; and Europe, 74.3%. Chi-square tests show that there was no statistically significant relationship between international graduate-level learners who experienced transformative learning and those who did not experience transformative learning by continent of birth with a $p$-value of 0.258, $\chi^2(3) = 4.028$, $p = 0.258$ and a small effect size (Cohen’s $\nu = 0.100$).
Table 31

Percentage Response of Participants Who Experienced Transformative Learning and Those Who Did Not Experience Transformative Learning by Continent of Birth

<table>
<thead>
<tr>
<th>Continent of Birth</th>
<th>Transformative Learning</th>
<th>Africa</th>
<th></th>
<th>Asia</th>
<th></th>
<th>Europe</th>
<th></th>
<th>Latin Am*</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Experienced transformative learning</td>
<td>39</td>
<td>84.7</td>
<td>163</td>
<td>82.3</td>
<td>55</td>
<td>74.3</td>
<td>63</td>
<td>75.0</td>
<td></td>
</tr>
<tr>
<td>Did not experience transformative learning</td>
<td>7</td>
<td>15.2</td>
<td>35</td>
<td>17.7</td>
<td>19</td>
<td>25.7</td>
<td>21</td>
<td>25.0</td>
<td></td>
</tr>
</tbody>
</table>

N=402, p-value=0.258, χ²=4.028, *Latin Am – Latin America

Table 32 displays the percentage distribution of students who experienced transformative learning and those who did not experience transformative learning by number of years. The mean for graduate students who experienced transformative learning by number of years was 3.131 (M = 3.131) and for those who did not experience any form transformative learning by number of years was 3.695 (M = 3.695). The standard deviation for participants who experienced transformative learning experiences by number of years was 3.381 (SD = 3.381) and those who did not experience transformative learning by number of years was 3.068 (SD = 3.068).

The results indicate a t-test value of 0.231 and a p-value of 0.816. On the basis of the p-value of 0.816, there were no differences among participants who experienced transformative learning and those who did not experience transformative learning.
Table 32

Percentage Responses of Participants Reporting Transformative Learning Experiences and Those Who Did Not by Number of Years

<table>
<thead>
<tr>
<th></th>
<th>Experienced TL&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Did not experience TL&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number</td>
<td>320</td>
<td>82</td>
</tr>
<tr>
<td>Mean</td>
<td>3.131</td>
<td>3.695</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>3.381</td>
<td>3.068</td>
</tr>
<tr>
<td>t-test value</td>
<td>0.231</td>
<td></td>
</tr>
</tbody>
</table>

N=402, p-value=0.816, <sup>a</sup>TL=Transformative Learning

Research Question Three. The third research question for this study was, “Do the factors that promote transformative learning experiences of international graduate-level learners differ by demographic characteristic?” Pearson chi-square test was used to investigate the relationship between educational and non-educational factors that promote transformative learning experiences of international graduate-level learners and demographic characteristic such as age group, gender, and continent of birth.

Table 33 presents crosstabulations of responses for educational factors including critical thinking, classroom discussion, mentoring, personal self-reflection, class projects, term papers/essays, assigned readings, laboratory experiences, other, and transformative learning experiences of international graduate-level learners by gender. A breakdown of responses by the factors is summarized in Table 33. According to the data in Table 33, classroom discussion was most frequently identified by male students (85.2%) and by female students (75.3%).

A test of association revealed that there was not a significant relationship between classroom discussion and transformative learning experiences of international graduate-
level learners by gender with a $p$-value of 0.052 and a small effect size of (Cohen’s $\eta^2 = 0.123$). As seen in Table 33, chi-square tests demonstrated that there were no statistically significant associations between educational factors such as critical thinking, mentoring, personal reflection, class projects, term papers/essays, laboratory experiences, other, and transformative learning experiences of international graduate-level learners by gender, $\chi^2(1) = 0.562, p = 0.453, \chi^2(1) = 0.049, p = 0.825, \chi^2(1) = 1.742, p = 0.187, \chi^2(1) = 0.051, p = 0.822, \chi^2(1) = 3.179, p = 0.075, \chi^2(1) = 0.002, p = 0.963, \chi^2(1) = 0.419, p = 0.517$, and $\chi^2(1) = 0.411, p = 0.522$.

However, male international graduate students commonly classroom discussion (85.2%), followed by mentoring (83.9%), personal reflection (81.3%), class projects (83.9%), term papers/essays (87.1%), and laboratory experiences (76.8%) than females. With respect to female international graduate-level learners class projects and assigned readings received the same percentage of (84.9%) followed by term papers/essays (78.5%), critical thinking and personal reflection (75.3%).

The majority of the female international graduate-level learners mostly identified class projects (84.9) followed by assigned readings (84.9%), term papers/essays (78.5%), mentoring (82.4%), critical thinking (75.3%), classroom discussion (75.3%), personal reflection (74.2%), laboratory experiences (73.2%), and other (language acquisition and school environment) (40.9%).
Table 33

Crosstabulation of Responses for Educational Factors by Gender

<table>
<thead>
<tr>
<th>Education Factor/ Response</th>
<th>Gender</th>
<th></th>
<th></th>
<th>( \chi^2 )</th>
<th>( \omega )</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>n</td>
<td>%</td>
<td>Female</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critical Thinking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>123</td>
<td>79.4</td>
<td>70</td>
<td>75.3</td>
<td>0.562</td>
<td>0.048</td>
</tr>
<tr>
<td>No</td>
<td>32</td>
<td>20.6</td>
<td>23</td>
<td>24.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classroom Discussion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>132</td>
<td>85.2</td>
<td>70</td>
<td>75.3</td>
<td>3.765</td>
<td>0.123</td>
</tr>
<tr>
<td>No</td>
<td>23</td>
<td>14.8</td>
<td>23</td>
<td>24.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mentoring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>130</td>
<td>83.9</td>
<td>77</td>
<td>82.8</td>
<td>0.049</td>
<td>0.014</td>
</tr>
<tr>
<td>No</td>
<td>25</td>
<td>16.1</td>
<td>16</td>
<td>17.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Reflection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>126</td>
<td>81.3</td>
<td>69</td>
<td>74.2</td>
<td>1.742</td>
<td>0.084</td>
</tr>
<tr>
<td>No</td>
<td>29</td>
<td>18.7</td>
<td>24</td>
<td>25.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class Projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>130</td>
<td>83.9</td>
<td>79</td>
<td>84.9</td>
<td>0.051</td>
<td>0.014</td>
</tr>
<tr>
<td>No</td>
<td>25</td>
<td>16.1</td>
<td>14</td>
<td>15.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Term Papers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>135</td>
<td>87.1</td>
<td>73</td>
<td>78.5</td>
<td>3.179</td>
<td>0.113</td>
</tr>
<tr>
<td>No</td>
<td>20</td>
<td>12.9</td>
<td>20</td>
<td>21.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assigned Readings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>132</td>
<td>85.3</td>
<td>79</td>
<td>84.9</td>
<td>0.002</td>
<td>0.003</td>
</tr>
<tr>
<td>No</td>
<td>23</td>
<td>14.8</td>
<td>14</td>
<td>15.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab Experiences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>119</td>
<td>76.8</td>
<td>68</td>
<td>73.2</td>
<td>0.419</td>
<td>0.041</td>
</tr>
<tr>
<td>No</td>
<td>36</td>
<td>23.2</td>
<td>25</td>
<td>26.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>57</td>
<td>36.8</td>
<td>38</td>
<td>40.9</td>
<td>0.411</td>
<td>0.041</td>
</tr>
<tr>
<td>No</td>
<td>98</td>
<td>63.2</td>
<td>55</td>
<td>59.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( n=248 \)

\( \omega = \text{effect size} \)
Table 34 presents crosstabulation of responses for non-educational factors such as marriage, moving/relocation, change of job, loss of job, divorce/separation, death of a loved one, learning new culture, other (language acquisition and school environment) and the reported transformative learning experiences of international graduate-level learners by gender.

According to the information in Table 34, chi-square tests show that there was no statistically significant association between non-educational factors namely marriage, moving/relocation, change of job, loss of job, divorce/separation, death of a loved one, learning new culture, other, and transformative learning experiences of international graduate-level learners by gender, $\chi^2(1) = 1.714, p = 0.191, \chi^2(1) = 1.077, p = 0.299, \chi^2(1) = 0.414, p = 0.520, \chi^2(1) = 1.438, p = 0.230, \chi^2(1) = 0.014, p = 0.906, \chi^2(1) = 0.034, p = 0.853, \chi^2(1) = 0.806, p = 0.369,$ and $\chi^2(1) = 0.009, p = 0.926$. Learning new culture was most commonly identified by male students (90.2%) and notably higher by female students (94.0%). The data in Table 35, the majority of male international graduate-level learners frequently identified moving/relocation (93.5%), change of job (87.0%), loss of job (94.3%), and divorce/separation (81.3%) than females. However, female international graduate-level learners commonly identified marriage (86.6%), death of a loved one (77.6%), learning new culture (94.0%), and other (20.9%) than males. A test of association showed that there was no statistically significant relationship between marriage and gender with a $p$-value of 0.191 and a relatively small effect size (Cohen’s $\mu = 0.095$). Additionally, a test of association showed that there was no statistically significant association between loss of job and transformative learning experiences of international graduate-level learners by gender, $\chi^2(1) = 1.438, p = 0.230$ respectively.
Table 34

*Crosstabulation of Responses for Non-Educational Factors by Gender*

<table>
<thead>
<tr>
<th>Non-Education Factor/Response</th>
<th>Male</th>
<th>Female</th>
<th>$\chi^2$</th>
<th>$w$</th>
<th>$p$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marriage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>97</td>
<td>78.9</td>
<td>58</td>
<td>86.6</td>
<td>1.714</td>
</tr>
<tr>
<td>No</td>
<td>26</td>
<td>21.1</td>
<td>9</td>
<td>13.4</td>
<td></td>
</tr>
<tr>
<td>Moving/Relocation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>115</td>
<td>93.5</td>
<td>65</td>
<td>91.1</td>
<td>1.077</td>
</tr>
<tr>
<td>No</td>
<td>8</td>
<td>6.5</td>
<td>2</td>
<td>2.9</td>
<td></td>
</tr>
<tr>
<td>Change of Job</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>107</td>
<td>87.0</td>
<td>56</td>
<td>83.6</td>
<td>0.414</td>
</tr>
<tr>
<td>No</td>
<td>16</td>
<td>13.0</td>
<td>11</td>
<td>16.4</td>
<td></td>
</tr>
<tr>
<td>Loss of Job</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>116</td>
<td>94.3</td>
<td>60</td>
<td>89.6</td>
<td>1.438</td>
</tr>
<tr>
<td>No</td>
<td>7</td>
<td>5.7</td>
<td>7</td>
<td>10.4</td>
<td></td>
</tr>
<tr>
<td>Divorce/Separation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>100</td>
<td>81.3</td>
<td>54</td>
<td>80.6</td>
<td>0.014</td>
</tr>
<tr>
<td>No</td>
<td>23</td>
<td>18.7</td>
<td>13</td>
<td>19.4</td>
<td></td>
</tr>
<tr>
<td>Death of a Loved One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>94</td>
<td>76.4</td>
<td>52</td>
<td>77.6</td>
<td>0.034</td>
</tr>
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</table>

$n=190$

$w =$ effect size

Non-ed factors/Res$=$ Non-educational factors/Response
Table 35 presents crosstabulation of responses for educational factors such as critical thinking, classroom discussion, mentoring, personal reflection, class projects, term papers/essays, assigned readings, laboratory experiences, other, and the reported transformative learning experiences of international graduate-level learners by age group. Pearson chi-square tests were used to analyze the results. Chi-square tests shows that there was statistically significant relationship between mentoring and transformative learning experiences of international graduate-level learners by age group, \( \chi^2(1) = 8.989, p = 0.029 \), with a small effect size of (Cohen’s \( \omega = 0.190 \)). However, a test of association showed that there were no statistically significant associations between critical thinking, classroom discussion, personal reflection, class projects, term papers, assigned readings, laboratory experiences, other, and age group \( \chi^2(1) = 2.927, p = 0.403, \chi^2(1) = 2.452, p = 0.484, \chi^2(1) = 0.061, p = 0.823, \chi^2(1) = 1.280, p = 0.734, \chi^2(1) = 1.945, p = 0.584, \chi^2(1) = 3.549, p = 0.314, \chi^2(1) = 3.884, p = 0.274, \) and \( \chi^2(1) = 1.807, p = 0.613 \). As seen in Table 35, the majority of the older international graduate-level learners (49+) years commonly identified mentoring (100%) followed by class projects (100%), personal self-reflection (100%), laboratory experiences (100%), and other (100%) than younger adults. International graduate students between age groups 20-29 years mostly identified class projects (86.2%) followed by classroom discussion (83.8%), and personal reflection (77.7%) than those in the 30-39 years, 40-49 years, and 49 years and above. International graduate students in 30-39 frequently identified term papers (85.6%), critical thinking (82.3%), and personal reflection (80.2%). Those in the 40-49 years most frequently identified assigned readings (95.0%) followed by laboratory experiences (85.0%), and other (45.0%).
Table 35

*Crosstabulation of Responses for Educational Factors by Age Group*

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<th>(w)</th>
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\(n=248\)

\(w=\)effect size

\(\text{yrs} = \text{years}\)
Table 36 demonstrates crosstabulation of responses for non-educational factors including marriage, moving/relocation, change of job, loss of job, divorce/separation, death of a loved one, learning new culture, other and the reported transformative learning experiences of international graduate-level learners by age group. Pearson chi-square test was performed to analyze this information. A breakdown of the responses by the factors is summarized in Table 36.

According to the data in Table 36, all non-educational factors namely marriage, moving/relocation, change of job, loss of job, divorce/separation, death of a loved one, learning new culture, and others showed no statistically significant relationship with transformative learning experiences of international graduate-level learners, $\chi^2(1) = 1.102, p = 0.575$, $\chi^2(1) = 3.706, p = 0.157$, $\chi^2(1) = 1.556, p = 0.459$, $\chi^2(1) = 4.625, p = 0.099$, $\chi^2(1) = 0.353, p = 0.838$, $\chi^2(1) = 3.283, p = 0.194$, $\chi^2(1) = 1.288, p = 0.525$, and $\chi^2(1) = 2.710, p = 0.258$. Most international graduate students commonly identified loss of job with age group 40-49 years (100%) followed by 30-39 years (96.9%), and 20-29 years (89.3%). The data in Table 36 show that the majority of the international graduate-level learners in the age group (40-49 years) commonly identified loss of job (100%), followed by marriage (92.3%), and death of a loved one (92.3%) than younger adults (20-29 and 30-39 years). However, those in the age group (30-39 years) mostly identified learning new culture (93.8%) followed by change of job (89.2%), and divorce/separation (83.1%) than other age groups (20-29 and 40-49 years). International graduate students in the age group (20-29 years) frequently identified moving/relocation (97.3%) and other (24.1%) than those in the age groups 30-39 years, 40-49 years, and 49 years and above.
### Table 36

**Crosstabulation of Responses for Non-Educational Factors by Age Group**

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<th>Non-Education Factor/Response</th>
<th>20-29 yrs</th>
<th>30-39 yrs</th>
<th>40-49 yrs</th>
<th>49+ yrs</th>
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<th>$\nu$</th>
<th>p-value</th>
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<td><strong>Learning New Culture</strong></td>
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$n=190$

$\nu=$effect size

yrs = years
Table 37 demonstrates crosstabulation of responses for critical thinking, classroom discussion, mentoring, personal self-reflection, class projects, term papers/essays, assigned readings, laboratory experiences, other, and the reported transformative learning experiences of international graduate-level learners by continent of birth. Pearson chi-square test was used to analyze this information. A breakdown of the responses by the factors is summarized in Table 37.

The information in Table 37 show that classroom discussion was most frequently identified by Asian graduate-level learners (87.6%), followed by European graduate-level learners (80.5%), Latin American graduate-level learners (74.5%), and African graduate-level learners (66.7%). There was a statistically significant association between classroom discussion and transformative learning experiences of international graduate students by continent of birth with a $p$-value of 0.032 and a relatively small effect size (Cohen’s $\omega = 0.188$). A test of association between class projects, assigned readings, and transformative learning experiences by continent of birth was statistically significant, $\chi^2(3) = 8.923, p = 0.030, \chi^2(3) = 8.280, p = 0.041$.

As seen in Table 37, the majority of international graduate-level learners from Asia mostly identified class projects (90.7%) followed by assigned readings (89.1%), mentoring (88.4%), classroom discussion (87.6%), personal reflection (82.9%), critical thinking (79.8), and lab experiences (79.8%) than international graduate-level learners from Africa, Europe, and Latin America. Most international graduate students from Europe commonly identified term papers (85.4%) than those from Africa, Asia, and Latin America.
Table 37

*Crosstabulation of Responses for Educational Factors by Continent of Birth*

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<td>%</td>
<td>Asia</td>
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<td>Europe</td>
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n=248

ω=effect size

<sup>a</sup>Latin Am – Latin America
Table 38 demonstrates crosstabulations of responses for non-educational factors such as marriage, moving/relocation, change of job, loss of job, divorce/separation, death of a loved one, learning new culture, other, and the reported transformative learning experiences of international graduate-level learners by continent of birth. Pearson chi-square test was used to analyze this information. A breakdown of the responses by the factors is summarized in Table 38.

As seen in Table 38, moving/relocation was most frequently identified by students from Asia (98.0%), followed by Latin America (96.7%), Europe (91.2%) and notably less by those from Africa (84.6%). Chi-square tests show a statistically significant association between moving/relocation and continent of birth with a $p$-value of 0.036 and a relatively small effect size ($\text{Cohen's } \omega = 0.212$). There was a statistical relationship between learning new culture and transformative learning experiences of international graduate-level learners by continent of birth, $\chi^2(3) = 8.525, p = 0.036$. The information in Table 38 show that international graduate students from Europe commonly identified loss of job (97.1%) followed by divorced/separation (91.2%), and others (35.3%) than those from Africa, Asia, and Latin America. International graduate students from Africa commonly identified death of a loved one (76.9%) than those from Asia, Europe, and Latin America. International graduate students from Asia mostly identified moving/relocation (98.0%) followed by learning new culture (97.0%) than those from Africa, Europe, and Latin America. Those from Latin America frequently identified marriage (90.0%) and change of job (90.0%) than graduate students from Africa, Asia, and Europe.
Table 38

*Crosstabulation of Responses for Non-Educational Factors by Continent of Birth*

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<th>Continent of Birth</th>
<th>Latin Am&lt;sup&gt;a&lt;/sup&gt;</th>
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<th>Moving/Relocation</th>
<th>Change of Job</th>
<th>Loss of Job</th>
<th>Divorced/Separation</th>
<th>Death of a Loved One</th>
<th>Learning New Culture</th>
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<td>n %</td>
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n=248

w=effect size

<sup>a</sup>Latin Am – Latin America
**Research Question Four.** The fourth research question considered for this study was, “Do the factors that promote transformative learning experiences of international graduate-level learners differ by college?” This section investigates the relationship between factors that promote transformative learning experiences of international graduate-level learners by college (Arts & Sciences and Engineering). Pearson chi-square test was used to analyze this information. Class project was frequently identified by students in the college of Arts and Sciences (85.6%) and less notably by those in the College of Engineering (83.1%). A test of association shows that there was no statistically significant relationship between class projects and transformative learning experiences of international graduate-level learners with a $p$-value of 0.587 and a small effect size (Cohen’s $w = 0.035$). Chi-square tests reveal that there was no statistically significant relationship between critical thinking, classroom discussion, mentoring, personal reflection, term papers, assigned readings, laboratory experiences, other, and transformative learning experiences of international graduate-level learners by college, $\chi^2(1) = 2.186, p = 0.139$, $\chi^2(1) = 0.001, p = 0.971$, $\chi^2(1) = 1.442, p = 0.230$, $\chi^2(1) = 0.306, p = 0.580$, $\chi^2(1) = 0.127, p = 0.721$, $\chi^2(1) = 0.047, p = 0.829$, $\chi^2(1) = 0.091, p = 0.762$, and $\chi^2(1) = 0.701, p = 0.402$. The information in Table 39 indicates that most international graduate-level learners in the College of Arts and Sciences frequently identified mentoring (86.4%) followed by class projects (85.6%), term papers (84.7%), assigned readings (85.6%), and laboratory experiences (76.3%) than those in Engineering. However, international graduate students in the College of Engineering commonly identified critical thinking (81.5%) followed by classroom discussion (81.5), personal reflection (80.0%), and other (40.8%) than in the College of Arts and Sciences.
Table 39

Crosstabulation of Responses for Educational Factors by College

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n=248

W=effect size

A & S—Arts and Sciences
Eng—Engineering
Pearson chi-square test analysis were used to investigate the relationship between non-educational factors namely marriage, moving/relocation, change of job, loss of job, divorce/separation, death of a loved one, learning new culture, others, and transformative learning experiences of international graduate-level learners by college. Pearson chi-square test was used to analyze this information. The number of participants falling in the resulting 20 categories were recorded and summarized as illustrated in Table 40.

As seen in Table 40, moving/relocation was most frequently identified by students in the (96.8%) and less notably by those in the College of Engineering (92.6%). As seen in Table 40, the association between marriage, change of job, and transformative learning experiences of international graduate-level learners was statistically significant, $\chi^2(1) = 3.959$, $p = 0.047$, $\chi^2(1) = 9.350$, $p = 0.002$. However, chi-square tests shows that there was no statistically significant relationship between moving/relocation, loss of job, divorce/separation, death of a loved one, learning new culture, others, and transformative learning experiences of international graduate-level learners by college, $\chi^2(1) = 1.779$, $p = 0.182$, $\chi^2(1) = 1.145$, $p = 0.285$, $\chi^2(1) = 0.090$, $p = 0.764$, $\chi^2(1) = 0.236$, $p = 0.666$, $\chi^2(1) = 0.321$, $p = 0.571$, $\chi^2(1) = 0.011$, $p = 0.916$.

The information in Table 40 reveal that most international graduate-level learners in the College of Arts and Sciences frequently identified moving/relocation (96.8%) followed by death of a loved one (80.2%), learning new culture (92.7%), and other (20.8%) than those in the College of Engineering. However, international graduate students in the College of Engineering commonly identified marriage (87.2%) followed by change of job (93.6%), loss of job (94.7%), and divorce/separation (81.9%) than those in the College of Arts and Sciences.
Table 40

*Crosstabulation of Responses for Non-Educational Factors by College*

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\(n=190\)

\(\Psi=\text{effect size}\)

\(^a\)A & S—Arts and Sciences

\(^b\)Eng—Engineering
Open-Ended Responses

The purpose of the open-ended response questions was to gather additional information from participants and expand the results of the quantitative data. Participants who experienced transformative learning were asked to provide a brief description about their transformative learning experiences in written statements. The researcher read through all the 320 open-ended responses with the help of a peer reviewer. This was to maintain triangulation of the categories that emerged from the data. Question two was asked, “If yes to ‘Since you have been taking courses at USF, do you believe you have experienced a situation when you realized that your values, beliefs, opinions or expectations had changed?’ Briefly describe what happened.” The major categories of responses that emerged included learning new culture, support from major professors, school environment and diversity. With respect to learning new culture, a participant asserted,

During a course about critical race theory, I began to question my ideas about race and racism in the US. I would call it a truly transformative learning experience in that I went through a painful and emotionally challenging time. But after a thorough critical reflection, my whole belief system about race changed.

Another participant stated,

When I moved to the United States, I experienced a lot of difficult things. I had to learn English and understand some aspect of the culture. The professors teach different and had to adjust my learning styles in order to understand the concepts. I planned going back to China but with assistance from some of professors I stayed. I think I have gone through an important change in life.

With respect to written responses to school environment and diversity, a participant noted,

I now realize there is a world that is different than the one I have been immersed in for many years. I feel I have come a long way from this experience with a new understanding of what education means to others.
In reference to the literature review, King (2000) states that adult learners could experience transformative learning through other factors such as immigration, exposure to new cultures, and social issues. Another participant stated,

> When I was a child I had no values or beliefs but when I became an adult, I developed some values and beliefs that I adhere to. When I moved the United States I noticed that the culture was different. I had to learn how to speak English and tried my best to study the culture. This was a complete transformational experience for me.

As indicated in the literature review, Ritz (2010) asserted that adult learners are better prepared than children to evaluate the soundness of their understandings, beliefs, and the dependability of their way of making meaning of new experiences. A participant described her experiences as,

> My current faculty advisor helped me a lot to secure and understand what to do as graduate student. My experience and expectations had changed completely as a result of her influence on me at USF. Her support allowed me to critically examine my past and present life.

A participant from Gambia (Africa) commented,

> When you have a good professor, teacher or mentor, he actually boosts your self-confidence. If you do have self-confidence, it actually helps to improve your skills. You work at a pace, which is convenient and that is, what I have experienced at USF academically.

Faculty mentoring is an important step in helping adult learners in their perspective transformations. It is a powerful instrument on the journey to transformation (Daloz, 1999). Question seven in the survey was asked, “Thinking back to when you first realized that your views or perspective had changed, what did your being in school have to do with the experience of change?” The major categories were communication and social roles, college experience, and classroom discussion. For communication and social roles, a participant expressed his experience as
I think probably due to this kind of free communication in the classroom my attitude and perspective have changed. Previously I used to memorize any information or knowledge I receive that was the way I learned stuff, but due to the change I now try to think about something myself. I know the conclusion but I think it’s better to critique it too. I will think everything by myself before I ask or content to challenge and this makes me more knowledgeable by myself.

As stated in the literature review, Mezirow (1999, 2000) acknowledged that transformative learning experience is the process of using a prior interpretation to construe a new or revised interpretation of the meaning of one’s experience in order to guide future action. One student explained “My level of thinking evolved primarily due to assigned collegiate readings and classroom discussions. In other words, the scope of my in-class educational experiences greatly impacted my learning and social perspectives.” Another student described her experience as “I realized that my views or perspectives changed when I began to communicate with persons whom I used not to socialize with since enrolling in the program.” As stated in the literature review, dialogue is the medium for critical reflection to be put into action by which the learner’s experience is reflected on assumptions and beliefs (Mezirow, 2003a). The majority of the participants agreed that classroom discussions and open communications influenced them to experience perspective transformative learning. A participant indicated

It was hard for me in the beginning to make contributions during class discussions because I was not used to such open discussions in the classroom. Today, it is one of my best strategies to learn concepts. Adjusting to this kind of learning made to experience personal transformational learning.

As indicated in the literature review classroom discussions and dialogues allows the adult learners to branch out in their own directions of learning and begin to see in a very different perspective of their experience (King, 2005). Integration of all the three data sets revealed that learning activities such as assigned readings, class projects,
classroom discussion, mentoring/faculty support and major life events including marriage, change of job, moving/relocation, and learning new culture were the major factors that influenced international graduate-level learners to experience transformative learning.

**Observations**

A pilot study was conducted to check the reliability and validity of the instrument (the modified *Learning Activities Survey*). The researcher sent three emails to selected international graduate students in the colleges of Education, Arts and Sciences, Engineering, Business, and Behavioral and Community Sciences. The modified *Learning Activities Survey* questionnaire was sent to more than 50 international graduate-level learners to complete via an online survey. The online survey was set up so that participants could access or complete survey at one time. The response rate for the pilot study was low (less than 50%). This led the researcher to contact international graduate students via international students associations to find out the reasons why they did not complete the online survey.

The majority of the international graduate level learners stated that the name of the researcher was not familiar to them. Most participants from Africa, the researcher’s native homeland, also stated that the researcher’s name was unfamiliar in regards to names in their respective countries. It became evident that understanding the cultures of the international graduate-level learners could help the researcher explain and modify the language of the instrument. Thus, resulting from the above observations, the researcher met with participants at various international students associations to explain the purpose and rationale for the study. The presidents of various international student associations
were consulted prior to the initial meetings with the target population for assistance in 
distributing and collecting of completed surveys. After meeting international graduate-
level learners at their weekly meetings, most of them declared that they preferred to 
complete a paper version rather than the online version of the survey. These actions by 
the researcher led to a high response rate (75.17%) as compared to the response rate for 
the pilot study (less than 50%).

Another observation was that of participant’s response to questions five and six in 
the instrument. Those who checked “Yes” to question five defaulted to experience 
transformative learning associated with education and participants who checked “Yes” to 
question six defaulted to experience transformative learning as a result of non-education. 
However, the majority of the participants checked “Yes” to both questions five and six, 
which was not addressed in the original Learning Activities Survey. The researcher 
addressed this problem by coding participants who experienced transformative learning 
associated with both education and non-education (the combined PT-Index 2 and 3). 
Most participants, as second language learners, complained about the understanding of 
the term “mentoring” in the instrument, especially during the follow-up interviews.

Most participants from Asia were concerned with the confidentiality of 
information they shared. Thus, some of them were reluctant to share their new life 
experiences at the University of South Florida to the researcher. When asked by the 
researcher, they explained that information they provide could affect their immigration 
status. Female participants, regardless of their geographical place of birth, recognized 
this research as an opportunity to share their academic and non-academic experiences as 
females in the United States. They were excited and freely expressed their opinions
regarding major new life experiences, more so than than male participants. In few instances, the researcher had to go to participants to collect completed surveys because, some of the participant’s workload/schedules at their respective colleges or departments. In conclusion, the pilot study allowed the researcher to understand the cultures of the international graduate students, their work schedules, where and when to contact them to complete surveys. This helped to increase the response rate for the subsequent research study.

**Summary**

According to Mezirow (1990, 2000), transformative learning is the process whereby adult learners critically examine their beliefs, values, and assumptions in light of acquiring new knowledge and begin a process of personal and social change called reframing in perspective. Descriptive statistics, Pearson chi-square tests, follow-up interviews in a semi-structured format, and open-ended responses were used in the analysis of the data in this study.

Overall, 79.6% of the participants reported that they had experienced transformative learning while 20.4% reported that they had not experienced transformative learning. Among participants who experienced transformative learning, 32.3% of the transformative experiences were associated with education, 29.4% experienced both education and non-education, while 17.9% reported transformative learning related to non-educational factors. The results from this study showed that a significant proportion of the international graduate-level learners experienced transformative learning while taking classes at the university of South Florida. The study demonstrated that there was no evidence of relationship between international graduate-
level learners who experienced transformative learning and those who did not experience transformative learning by age group, continent of birth, number of years, and college.

In general, there was a statistically significant relationship between educational factors (assigned readings) and the transformative learning experiences of international graduate-level learners. There was no statistically significant relationship between non-educational factors, and the transformative learning experiences of international graduate-level learners.

Findings showed that there was no statistically significant association between educational, non-educational factors and the transformative learning experiences of international graduate-level learners by gender. For age group, there was no statistically significant relationship between educational, non-educational, and the transformative learning experiences of international graduate-level learners. However, mentoring was associated with the transformative learning experiences of international graduate-level learners by age group.

There was a statistically significant relationship between educational factors (i.e., classroom discussions, class projects, and assigned readings) and the transformative learning experiences of international graduate-level learners as it relates to continent of birth. There was a statistically significant relationship between non-educational factors (including moving/relocation, and learning new cultures) and the transformative learning experiences of international graduate-level learners by continent of birth.

Findings indicated that there was no statistically relationship between educational factors and the transformative learning experiences of international graduate-level learners as it relates to college. However, there was a statistically significant relationship
between non-educational factors (including marriage and change of job) and the transformative learning experiences of international graduate-level learners by college. An integration of the three data sets revealed that assigned readings and classroom discussion were mentioned in each of the data categories. Mentoring/faculty support and major life changes (i.e., job related and culture change) were the major non-educational factors that influenced international graduate-level learners to experience transformative learning.
Chapter 5

Summary, Conclusions, Implications, and Recommendations

The purpose of this study was to examine factors that promote transformative learning experiences of international graduate-level learners. This chapter includes the summary, conclusions, implications, and recommendations.

Summary

International graduate-level learners as adult learners are introduced to different cultural values and a varied form of academic curriculum upon their entry into the United States. Thus, it is necessary for them to learn and adapt to the paradigms of change in the social, economic, cultural, academic, and psychological dimensions of their new destination (Erichsen, 2009; Kung, 2007; Ritz, 2006, 2010). In the process of experiencing these transformational changes, international graduate-level learners begin to reflect on their beliefs, values, opinions, and assumptions.

The population for this study consisted of international graduate-level learners from Africa, Asia, Europe, and Latin America in the colleges of Arts and Sciences and Engineering. Mezirow’s theory of transformative learning (1978, 2000) was used as the theoretical framework for this research study. This theory utilized the concept of critical reflection, dialogue, and rational discourse, which occurs through the adult learner’s educational experience. Most of the international graduate-level learners were 20-29 and 30-39 years. The majority of the international graduate-level learners were from Asia, followed by Latin America, Europe, and Africa. The average number of semesters and
years were between two to six semesters and one to four years, respectively. There were more males than females. The modified Learning Activities Survey instrument was used to collect data for this study. The instrument was designed to identify how international graduate-level learners experience transformative learning associated with educational or non-educational experiences or a combination of both. A pilot study was conducted to establish the integrity of the data collection methods, evaluate the viability of the interviews, and assess the performance of the modified instrument for data collection.

Descriptive statistics, Pearson chi-square test, follow-up interviews in a semi-structured format, and open-ended responses were utilized in the analysis of the data in this study. The following research questions were answered in the study: (a) What are the factors that promote transformative learning experiences of international graduate-level learners? (b) What proportion of international graduate-level learners appear to have had transformative learning experiences? (c) Do the factors that promote transformative learning experiences of international graduate-level learners differ by demographic characteristic? (d) Do the factors that promote transformative learning experiences of international graduate-level learners differ by college?

The coding process entailed a scale of “PT-Index” (Perspective Transformation Index) to determine how international graduate-level learners experience transformative learning in relation to their educational and non-educational experiences. The score for each participant ranged on the scale of one to three. For participants who experienced transformative learning associated with education, their score was “3” (PT-Index 3). For those participants who experienced transformative learning associated with non-education (PT-Index 2), their score was “2”, for participants who did not experience any
form of transformative learning, their score was “1” (PT-Index 1), and for those those who experienced transformative learning from both educational and non-educational experiences were categorized as combined (PT-Index of 2 and 3).

A paper version of the modified Learning Activities Survey was distributed to international graduate-level learners to complete. The presidents of the various international student associations volunteered in the distribution and collection of completed questionnaires. Of the 560 surveys that were distributed, 421 of them were completed and returned. However, due to inconsistencies of information, 19 responses were not included in the coding and analysis for this study. Nine participants were selected by stratified random sample across gender, age group, continent of birth, and college for follow-up interviews in the semi-structured format. International graduate-level learners who checked one or more items in question one of the modified Learning Activities Survey and “Yes” in question two were categorized to have experienced transformative learning. Those who checked the “m” box in question one (“I do not identify with any of the statements above”) and “No” in question two were coded as not having experienced transformative learning.

In general, 79.6% of the participants reported that they had experienced transformative learning while 20.4% reported that they had not experienced transformative learning. Among participants who experienced transformative learning, 32.3% of the transformative experiences were associated with education, 29.4% experienced both education and non-education, while 17.9% reported transformative learning related to non-educational factors. Findings from this research study indicated that assigned readings (educational factor) were most commonly associated with
experiencing transformative learning of international graduate-level learners. However, no relationship existed between non-educational factors and the transformative learning experiences of international graduate-level learners.

For gender, there was no significant relationship with educational factors, non-educational factors, and the transformative learning experiences of international graduate-level learners. With regards to age group, there was no significant relationship between educational factors, non-educational factors, and the transformative learning experiences of international graduate-level learners. The exception was mentoring, which was associated with experiencing transformative learning of international graduate-level learners as related to age group.

For continent of birth, findings showed that there was a significant relationship between classroom activities (educational factors including classroom discussions, class projects, and assigned readings) and the transformative learning experiences of international graduate-level learners. The data revealed that there was a relationship between non-educational factors (including moving/relocation and learning new culture) and the transformative learning experiences of international graduate-level learners as related to continent of birth.

For college, there was no significant relationship between educational factors and the transformative learning experiences of international graduate-level learners. There was a significant relationship between non-educational factors (i.e., marriage and change of job) and the transformative learning experiences of international graduate-level learners by college. The major themes from the follow-up interviews were related to mentoring, classroom discussions, and new life experiences (learning new language and
culture). The categories of responses from the open-ended response questions were similar to the previous factors (mentoring, classroom discussions, new life experiences).

**Conclusions**

The conclusions that emerged from this research demonstrated that international graduate-level learners reported transformative learning as a result of both educational and non-educational experiences. Over three-fourths of the international graduate-level learners experienced transformative learning. These findings confirmed the results of other studies (Glisczinski, 2005; King, 1997a, 2000; LaCava, 2002; Brock, 2007; Wansick, 2007).

Findings from the three means of data collection (quantitative, follow-up interviews, and open-ended responses) indicated that there were similarities across the results. Classroom activities (including assigned readings, and class discussions) were mentioned in each of the data categories. Mentoring/faculty support and new major life changes (job related and culture) were mentioned as non-educational factors in all the three data categories.

In general, there was a relationship between participation in classroom activities (especially assigned readings) and experiencing transformative learning of international graduate-level learners. There was no relationship between non-educational factors and experiencing transformative learning of international graduate-level learners.

Overall, for educational transformative learning, more international graduate students reported experiencing educational transformative learning than non-educational across demographic characteristics and college. Educational transformative learning generally did not differ by age group; however, mentoring was identified as an
educational factor that influenced international graduate-leaners to experience transformative learning. Educational transformative learning as a result of classroom activities (educational factors) differed significantly by continent of birth, but there were no differences by gender and college.

For non-educational transformative learning, major life changes differed significantly for demographic categories (specifically, continent of birth) and college. However, there were no differences by the demographic categories of age group and gender.

**Implications**

An important educational implication from this research study could be for college administrators to recognize the influence of major life changes such as (learning language and school environment, status change, and communication barrier) on international graduate student transition to new academic life in the United States. The findings implied that social and service centers could be provided on college campus for international students. This could allow international graduate students to address some of the challenges they may face while taking classes during the initial phase of their academic course. This could be accomplished through the use of academic counseling and providing faculty support to these international students. International graduate students could also be encouraged to join various social clubs on campus that will allow them to familiarize with the cultures and educational experiences in the United States. Since findings from the study showed that more international graduate-level learners experienced transformative learning through major life changes (moving/relocation and learning new culture).
Another educational implication of this study would be for college administrators to support international graduate-level learners through comprehensive orientation programs to provide academic advising on the expectations from faculties, cultures of the new environment, and the community at large. Based on the findings from the study, mentoring had a significant relationship with educational factors, non-educational factors, and experiencing transformative learning of international graduate level learners. This would provide them the opportunity to understand the educational and non-educational experiences within the learning environment in which they may find themselves.

One educational implication of this study might be that faculties in higher education could practice theories in the classroom as documented in the quantitative and qualitative results of this study. This could be achieved when faculties incorporate classroom activities such as class projects, cooperative learning, class discussions, and critical thinking skills in their instructional delivery, so that international graduate students would have the opportunity to participate in the teaching-learning process. This could help them understand concepts from varied teaching methods as findings from the study show that classroom activities (assigned readings and classroom discussion) were highly associated with experiencing transformative learning of international graduate-level learners as relates to continent of birth. Faculties in higher education might have to encourage international graduate-level learners to engage in the decision-making process with respect to the drafting of the syllabus, planning of course work, and supporting of their research work.

Another practical implication from this study is that faculties in higher education might make the classroom-learning environment conducive to help international
graduate-level learners re-evaluate their life experiences, as well as share past experiences and assumptions with the purpose of establishing relationships with their faculties, colleagues, and classmates.

Another educational implication from this study is that faculties and college counselors must be aware that international graduate-level learners could adjust to the school environments once they are introduced to different teaching strategies such as classroom discussions, class projects, assigned readings, term papers/essays, and field experiences.

Furthermore, this research study indicated that the majority of the international graduate-level learners who experienced transformative learning have been in the United States between one to four years. The educational implication could be for college faculties to design and implement academic and non-academic support programs for international graduate-level learners during the first four years in order to help them adjust to their new environment. The data from the study revealed that there was a relationship with non-educational factors and the transformative learning experiences of international graduate-level learners as relates to college. This could provide them the knowledge of cultural awareness and sensitivity, campus life or school environment, and what to expect from faculties, students, and the community.

An educational implication from this research would help university administrators to design and implement academic and non-academic support programs that could enable international graduate-level learners to become acclimated to the social, cultural and academic environment of the institution they attend as indicated by Pohland and Bova (2000), Macleod et al. (2003), Mallory (2003), Feinstein (2004), and King
One of the best ways to promote transformative learning for adult learners is to provide them with learning experiences that are direct, personally engaging, and stimulating reflection upon experience.

Faculties could design programs that would provide comprehensive mentoring for international graduate-level learners at their respective colleges to experience smooth academic transition. According to the data, mentoring/faculty support and new life changes (job related and culture) emerged as non-educational factors in all the three data categories that influenced the transformative learning experiences of international graduate-level learners. Faculties could increase their integration of educational factors such as class projects, assigned readings, term papers, laboratory work, and classroom discussions within the course work in order to reduce the challenges international graduate-level learners face in their quest to understand the teaching styles of professors during the early part of their academic program. This could help them adapt to the United States educational system.

Finally, another educational implication from this study is that college administrators could establish language learning centers and social clubs for international graduate-level learners who are second language learners (English as second language learners) to study English and the cultures of the United States. This may help reduce communication and language barriers most international graduate-level learners face in relation to transformative learning experiences. The ability to study English language and cultures might allow them to communicate with faculties, staff, and colleagues. The results indicated that major non-educational factors such as marriage, change of job, and moving/relocation were associated with transformative learning. Thus, administrators
could make provisions for international graduate-level learners by securing employment on campus, transportation, housing, access to technology, and other basic amenities.

This study demonstrated that international graduate-level learners experience transformative learning in varied ways. As such, it is important for faculties to acknowledge that international graduate students experience transformative learning as a result of both classroom activities and major life events as part of their new academic journey in the United States. Faculties could provide academic services to fulfill the needs and interests of all international graduate-level learners.

**Recommendations for Further Study**

Based on the findings from this research, there are many recommendations for further study.

1. A major quantitative study could be conducted to identify the major factors that promote transformative learning experiences of international students (undergraduate and graduate) in all universities in the United States. The results could be compared to determine differences of transformative learning experiences of international students in the United States.

2. A quantitative study could be conducted to compare major factors that promote transformative learning experiences of international graduate-level learners and American students studying abroad. A comparative analysis of the data would demonstrate the differences of educational and non-educational factors that promote transformative learning experiences among international graduate-level learners and American students studying abroad.
3. Additional research could focus on factors that facilitate international students at varying levels of undergraduate, masters, and doctoral. The results could be compared to determine if there are differences among international students and transformative learning experiences in relation to undergraduate, masters, and doctoral levels.

4. Another study could focus on the non-educational factors that facilitate transformative learning experiences of international graduate-level learners in relation to college and demographic characteristics.

5. Additional research to determine the relationship between participants who experienced transformative learning as a result of both educational and non-educational experiences and transformative learning experiences of international students in general as the instrument did not address those who might check both of the experiences. This could help add knowledge to the literature about the factors that promotes transformative learning experiences of international students.

6. One additional area of research could be to expand this study by including international graduate-level learners from North America and Australia. The total population of all international graduate-level learners could enhance the analysis of the factors that promote transformative learning experiences of international graduate-level learners in American universities.

7. A study could be conducted to do a follow-up interview about participants who did not experience transformative learning. This could add to literature about the academic and non-academic experiences of international adult learners who did not experience any form of transformative learning as part of their life experiences in a new environment. This could help increase reliability and validity of the Learning Activities Survey.
8. Another study could focus on longitudinal studies about the transformative learning experiences of international students as related to both their academic and non-academic experiences at an American university over an extended period of time.
References


Kerka, S. (2002). *Journal writing as an adult educational learning tool: Practice application brief*. ERIC Clearinghouse on Adult, Career, and Vocational Education. (ED470782)


Appendix A

Original Learning Activities Survey

Dr. King’s Original Survey

LAS Format

This survey helps us learn about the experiences of adult learners. We believe that important things happen when adults learn new things. Only with your help can we learn more about this. The survey only takes a short time to complete, and your responses will be anonymous and confidential. Thank you for being part of this project; your cooperation is greatly appreciated.

1. Thinking about your educational experiences at this institution, check off any statements that may apply.

   a. I had an experience that caused me to question the way I normally act.
   b. I had an experience that caused me to question my ideas about social roles.
      (Examples of social roles include what a mother or father should do or how an adult child should act.)
   c. As I questioned my ideas, I realized I no longer agreed with my previous beliefs or role expectations.
   d. Or instead, as I questioned my ideas, I realized I still agreed with my beliefs or role expectations.
   e. I realized that other people also questioned their beliefs.
   f. I thought about acting in a different way from my usual beliefs and roles.
   g. I felt uncomfortable with traditional social expectations.
   h. I tried out new roles so that I would become more comfortable or confident in them.
   i. I tried to figure out a way to adopt these new ways of acting.
   j. I gathered the information I needed to adopt these new ways of acting.
   k. I began to think about the reactions and feedback from my new behaviors.
   l. I took action and adopted these new ways of acting.
   m. I do not identify with any of the statements above.

2. Since you have been taking courses at this institution, do you believe you have experienced a time when you realized that your values, beliefs, opinions, or expectations had changed?

   Yes. If “Yes,” please go to question #3 and continue the survey.
   No. If “No,” please go to question #8 to continue the survey.

3. Briefly describe what happened. (Use back page if more space is needed)

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Appendix A (Continued)

4. Which of the following influenced this change? (Check all that apply)
   Was it a person who influenced the change?  [ ] Yes  [ ] No
   
   If "Yes," was it . . . (check all that apply)
   [ ] Another student's support
   [ ] Your classmates' support
   [ ] Your advisor's support
   [ ] A challenge from your teacher
   [ ] Your teacher's support
   [ ] Other: ____________

   Was it part of a class assignment that influenced the change?
   [ ] Yes  [ ] No
   If "Yes," what was it? (check all that apply)
   [ ] Class/group projects
   [ ] Writing about your concerns
   [ ] Personal journal
   [ ] Nontraditional structure of a course
   [ ] Internship or co-op
   [ ] Deep, concentrated thought
   [ ] Personal learning assessment (PLA)
   [ ] Lab experiences
   [ ] Self-evaluations in a course
   [ ] Class activity/exercise
   [ ] Personal reflection
   [ ] Assigned readings
   [ ] Other: ____________

   Was it a significant change in your life that influenced the change?
   [ ] Yes  [ ] No
   If "Yes," what was it" (check all that apply)
   [ ] Marriage
   [ ] Moving
   [ ] Divorce/separation
   [ ] Change of job
   [ ] Loss of job
   [ ] Birth/adoption of a child
   [ ] Having to learn new culture
   [ ] Death of a loved one
   [ ] Retirement
   [ ] Other: ____________
Appendix A (Continued)

5. Thinking back to when you first realized that your views or perspective had changed, what did your being in school have to do with the experience of change?

6. Would you characterize yourself as one who usually thinks back over previous decisions or past behavior? Yes No

Would you say that you frequently reflect upon the meaning of your studies for yourself personally? Yes No

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Appendix A (Continued)

7. Which of the following have been parts of your experience at this institution? (Please check all that apply.)
   - Another student’s support
   - Your classmates’ support
   - Your advisor’s support
   - Class/group projects
   - Writing about your concerns
   - Personal journal
   - Nontraditional structure of a course
   - Internship or co-op
   - Deep, concentrated thought
   - Personal learning assessment (PLA)
   - Other: ______________

Which of the following occurred while you have been taking courses at this institution?
   - Marriage
   - Moving
   - Divorce/separation
   - Change of job
   - Loss of job
   - Other: ______________

8. Sex:  [ ] Male  [ ] Female


10. Race:  [ ] White, non-Hispanic  [ ] Black, non-Hispanic  [ ] Other (please specify)
    - Hispanic
    - Asian or Pacific Islander

11. Current major:
    - Allied Health
    - Business
    - Computer Science
    - English
    - Other: ______________

12. Prior education
    - High school diploma / GED
    - Associates degree
    - Bachelors degree
    - Masters degree
    - Doctorate
    - Other: ______________

13. How many semesters have you been enrolled at this institution? ______________


Thank you for completing this questionnaire!

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178
FOLLOW-UP INTERVIEW QUESTIONS

Name _____________________ Date __________________

School _____________________ Interview Initials ______

This interview is part of research that included the survey you took. The research is about the experiences of adult learners. We believe that important things happen when adults re-enter school and learn new things. Only with your help can we learn more about this. The interview should only take half an hour to complete, and your responses will be anonymous. Thank you in advance for being part of this project; your cooperation is greatly appreciated.

The interview questions are designed to gather further information about the topics covered in the original survey, so some of them may sound familiar to you.

1. Thinking back over your education, have you experienced a time when you realized that your values, beliefs or expectations had changed?

2. Briefly describe that experience:

3. Do you know what triggered it? If so, please explain.
Appendix B (Continued)

4. Which of the following influenced this change? (Check all that apply)
   a. Was it a person who influenced the change? Yes No
   b. If "Yes," was it . . .
      □ Another student's support □ Your classmates' support
      □ A challenge from your teacher □ Your teacher's support
      □ Your advisor's support □ Other: ____________
   c. Was it part of a class assignment that influenced the change?
      Yes No
   d. If "Yes," what was it?
      □ Class/group projects □ Writing about your concerns
      □ Personal self-reflection □ Classroom discussions/dialogues
      □ Mentoring □ Assigned readings
      □ Personal learning assessment (PLA) □ Term Papers/Essays
      □ Verbally discussing your concerns □ Self-evaluation in a course
      □ Class activity/exercise □ Lab experiences
      □ Other: ____________
   e. Or was it a significant change in your life that influenced the change?
      Yes No
   f. If "Yes," what was it?
      □ Marriage □ Loss of a job □ Moving
      □ Divorce/separation □ Death of a loved one □ Change of job
      □ Addition of a child □ Retirement □ Other: ____________
   g. Perhaps it was something else that influenced the change:

5. Describe how any of the above educational experiences influenced the change:
Appendix B (Continued)

6. What could have been differently in the classes to have helped this change? What specific activities?

7. Thinking back to when you first realized that your views or perspective had changed:

   a. When did you first realize this change had happened? Was it while it was happening, mid-change, or once it had entirely happened (retrospective)?

   b. What made you aware that this change had happened?

   c. What did your being in school have to do with it?

   d. What did you do about it?

   e. How did/do you feel about the change?

8. Do you have any questions?

Interviewer comments:
Appendix C
Letters of Authorization

Response from Dr. King

October 13, 2010

Alex Kumi-Yeboah
Doctoral candidate,
University of South Florida
akumuyebo@mail.usf.edu

Dear Mr. Kumi-Yeboah,

Thank you for your inquiry and interest in transformative learning research. I am pleased to provide permission for you to use the "Learning Activities Survey" instrument in your research as a doctoral student at University of South Florida. As we have discussed, my only requirement is that I be contacted (which you have done) and that you sue the 2009 manual to guide your research and analysis with the instrument. I wish you every success with your studies and research.

Sincerely,

[Signature]

Kathleen P. King, EdD
University of South Florida
kathleenking@usf.edu
tel 813-974-0030
January 26, 2011

To Whom It May Concern,

This is to certify that Alex Kumi-Yeboah, a doctoral candidate in the Department of Adult, Career and Higher Education, College of Education (USF) with USF ID #U80989099, has been given permission to contact and interview international graduate students in regards to his research study entitled "Transformative Learning Experiences of International Graduate Level Learners"

If you have questions, please contact Dr. Wayne James, Professor, Adult Education, USF College of Education at: wjames7846@aol.com.

Sincerely,

Maria Crummett, PhD
Associate Vice President for Global Affairs
USF World

CC: Marcia Taylor
Appendix D
Modified Learning Activities Survey

SURVEY INSTRUCTIONS

Thank you for your willingness to participate in the research. Please read the following instructions before taking the survey.

This survey is part of a research project about the experiences of graduate learners at USF. It is important that you answer the questions based on experiences related to your education at USF. The survey only takes a short time to complete, and your responses will be anonymous and confidential; data collected from the survey will be presented as a group so that the identity of any one participant will not be revealed.

As participants you are also invited to take part in a half-hour follow-up interview. Those who are interested should fill out and return the separate form for this purpose. Space is provided on this form to submit questions about the survey to the researcher.

Again, Thank you for your help. If you would like to receive more information about the research findings, please write your address below.

Thank you in advance,
Alex Kumi-Yeboah
Email: akumiyeb@mail.usf.edu

Should you delay in returning this survey, please send it to the following address:

Alex Kumi-Yeboah, Graduate Student
ACHE, EDU 105
College of Education, USF
4202 East Fowler Avenue
Tampa, FL 33620-5650
LEARNING ACTIVITIES SURVEY (LAS)

This survey helps us learn about the experiences of adult learners at USF. We believe that important things happen when adults learn new things. Only with your help can we learn more about this. The survey only takes a short time to complete, and your responses will be anonymous and confidential. Thank you for being part of this project; your cooperation is greatly appreciated.

1. Thinking about your educational experiences at USF, check off any statements that may apply. (It is okay not to check those items in question # 1 that do not apply to you if no statement apply, check "m" below and "No" on Question #2.

   a. I had an experience that caused me to question the way I normally act.
   b. I had an experience that caused me to question my ideas about social roles.
      (Examples of social roles include what a mother or father should do or how an adult child should act.)
   c. As I questioned my ideas, I realized I no longer agreed with my previous beliefs or role expectations.
   d. Or instead, as I questioned my ideas, I realized I still agreed with my beliefs or role expectations.
   e. I realized that other people also questioned their beliefs.
   f. I thought about acting in a different way from my usual beliefs and roles.
   g. I felt uncomfortable with traditional social expectations.
   h. I tried out new roles so that I would become more comfortable or confident in them.
   i. I tried to figure out a way to adopt these new ways of acting.
   j. I gathered the information I needed to adopt these new ways of acting.
   k. I began to think about the reactions and feedback from my new behaviors.
   l. I took action and adopted these new ways of acting.
   m. I do not identify with any of the statements above.

2. Since you have been taking courses at USF, do you believe you have experienced a time when you realized that your values, beliefs, opinions, or expectations had changed? (If you checked “m” on question 1, your response should be “NO” on this question)

   □ Yes. If "Yes," please go to question #3 and continue the survey.
   □ No. If "No," please go to question #8 to continue the survey.
Appendix D (Continued)

3. Briefly describe what happened. (Use back page if more space is needed)

4. Which of the following influenced this change? (Check all that apply)
   - Was it a person who influenced the change?
     - Yes
     - No
   - If "Yes," what was it? . . . (check all that apply)
   - If “No,” (Please skip to question # 5)
     - Another student's support
     - Your teacher's support
     - A challenge from your teacher
     - Other: (please specify) ____________________________________________

5. Was it part of a class assignment that influenced the change?
   - Yes
   - No
   - If "Yes," what was it? . . . (check all that apply)
   - If “No,” (Please skip to question # 6)
     - Classroom discussions/dialogues
     - Critical thinking
     - Class/group projects
     - Personal self-reflection
     - Other: (please specify) ____________________________________________

6. Was it a significant change in your life that influenced the change?
   - Yes
   - No
   - If "Yes," what was it? . . . (check all that apply)
   - If “No,” (Please skip to question # 7)
     - Marriage
     - Moving/relocation/change of residence
     - Divorce/separation
     - Change of job
     - Loss of job
     - Having to learn new culture
     - Death of a loved one
     - Other: (please specify) ____________________________________________
Appendix D (Continued)

7. Thinking back to when you first realized that your views or perspective had changed, what did your being in school have to do with the experience of change? (Use back page if more space is needed)

8. Would you characterize yourself as one who usually reflects over previous decisions or past behavior?

☐ Yes  ☐ No

9. Would you say that you frequently reflect upon the meaning and application of your studies for yourself, personally?

☐ Yes  ☐ No

10. Which of the following have influenced your experience at USF? (Please check all that apply.)

☐ Classroom discussions/dialogues  ☐ Mentoring
☐ Critical thinking  ☐ Term papers/essay
☐ Personal self-reflection  ☐ Lab experiences
☐ Class/group projects  ☐ Assigned readings
☐ Other: (please specify) __________________________

11. Which of the following occurred while taking classes at USF?

☐ Moving  ☐ Marriage
☐ Death of a loved one  ☐ Divorce/separation
☐ Loss of job  ☐ Change of job
☐ Other: (please specify) __________________________

12. Go back to your response(s) for question 4 and on page 3 if you checked “Yes” and more than one response, which one was the most influential for you? (Check only one)

☐ Another student's support  ☐ Your classmates' support
☐ Your teacher's support  ☐ Your advisor's support
☐ A challenge from your teacher  ☐ Other: (please specify) _________

☐ Did not check more than one.
Appendix D (Continued)

13. Go back to your response(s) for question 5 and on page 3, if you checked “Yes” and more than one response, which one was the most influential for you? (Check only one)

☐ Classroom discussions/dialogues ☐ Mentoring
☐ Critical thinking ☐ Term papers/essays
☐ Personal self-reflection ☐ Lab experiences
☐ Other: (please specify) ___________________ ☐ Assigned readings
☐ Did not check more than one.

14. Go back to your response(s) for question 6 and on page 3 if you checked “Yes” and more than one response, which one was the most influential for you? (Check only one)

☐ Moving/relocation/change of residence
☐ Divorce/separation
☐ Change of job
☐ Loss of job
☐ Other: (please specify) ___________________ 
☐ Did not check more than one.

Demographic Information
(Please check your response under each question)

1. Sex: ☐ Male ☐ Female
2. Marital Status: ☐ Single ☐ Married ☐ Divorced/separated ☐ Widowed

3. Race/Ethnicity
☐ White, non-Hispanic ☐ Black, non-Hispanic
☐ Hispanic ☐ Asian or Pacific Islander
☐ Arab/Middle Eastern ☐ Other: (please specify) ___________________

4. College

☐ Arts and Sciences ☐ Engineering
☐ Other: (please specify) __________________________________________

5. What is your area of concentration and degree program? ____________________

Example: Civil Engineering, Masters MSC (Engineering)

Geography, Ph. D (Arts and Sciences)
Appendix D (Continued)

6. Previous Educational Level
   □ High school diploma □ Associate's Degree
   □ Bachelor's Degree □ Master's degree
   □ Doctorate
   □ Other: (please specify) ________________________________________________

7. Continent/Geographical Region of Birth
   □ Africa □ Europe
   □ Asia □ North America
   □ Australia □ Other: (please specify) __________________
   □ Latin America (including countries in South America)

8. How long have you been in the United States? ______________________________

9. How many semesters have you been enrolled at USF? _________________________

10. Age: □ 20-29 □ 30-39 □ 40-49 □ Over 49 years

   Thank you for completing this questionnaire!
SIGN-UP FORM FOR FOLLOW-UP INTERVIEWS

As a participant in this survey, you are also invited to take part in a half-hour follow-up interview. If you are interested in doing so, please fill out and return this form. Space is also provided on this form to submit questions about the survey to the researcher. Please note that this form will be turned in separately in order for you to remain anonymous in the survey process. Please beware that only by volunteering for an interview will your name be associated with this form, so that you may be contacted if your survey is selected for follow-up interview by the researcher. Please be assured that your interview record will be anonymous and confidential.

☐ Yes, I am willing to participate in an interview regarding the educational experiences described in the survey.
☐ No, I would not like to participate in the follow-up interview process.

If you answered “Yes,” you may receive a call from Alex Kumi-Yeboah, at the University of South Florida’s Department of Adult, Career, and Higher Education, College of Education.

Name:
Email:
Phone Number:
Best time to call:
Questions for the researcher:

Thank you in advance,

Alex Kumi-Yeboah, Graduate Student
ACHE, EDU 105
College of Education, USF
4202 East Fowler Avenue
Tampa, FL 33620-5650
Email: akumiyeb@mail.usf.edu
Appendix E

Letter to Participants

Dear Colleagues,

I am a doctoral candidate at the College of Education University of South Florida. I am interested in obtaining college student's transformative learning. I need your assistance in this pilot study by completing the following survey. This survey is a pilot study of a research project titled *Factors that Promote Transformative Learning Experiences of International Graduate-Level Learners*. It will take short time to complete (about 30 minutes) and your responses will be anonymous and confidential. Thank you for your participation and cooperation.

You are assured that the information you provide on the survey will be handled in confidence. Research records will be stored securely at the department of Adult, Career, and Higher Education at the College of Education USF, Tampa FL. Only the researchers and individuals responsible for research will have access to the records. Research data will be kept for five years after completion of the data analysis as required by the IRB. You are also assured that data are not being collected in such a way that any one student will be compared with another. Participation in this study is voluntary, and there is not a penalty for non-participation. However, by participating, you will be helping to develop an understanding of your learning experiences as an adult learner.

In addition to this survey, I will be seeking volunteers to do follow-up interviews regarding their learning experiences in college. You can help me with this pilot study by completing the survey by clicking on the link below. If you have any questions about the study, please call me at (xxx) xxx-xxxx or email me at akumiye@usf.edu

Thank you for your thoughtful participation in this research. I appreciate your help and value your contribution to transformative learning experiences of international learners.

Sincerely,

Alex Kumi-Yeboah
Doctoral Student
University of South Florida
Appendix E (Continued)

Participant Information:

1. You have read and understood this information about the research study.

2. For any questions that you have had, you have had the opportunity to contact the Principal Investigator, and have received a satisfactory response.

3. You understand that you are being asked to participate in research. You understand the risks and benefits, and you freely give your consent to participate in the research project outlined in this form, under the conditions indicated in it.

4. You have been given a copy of this information sheet (since this research is 1st a web-based survey, clicking on the “Next:” button constitutes your consent and signature. You may copy and paste the preceding information to a file and save it as your copy). The 2nd part of the research will be with 5 participants, to be determined at a later date. You will be able to decline that portion if you do not wish to participate.

I have read this information above. I understand that by clicking the link and filling out the information I am voluntarily agreeing to participate in this pilot study. Click here [http://survey.acomp.usf.edu/survey/entry.jsp?id=1289147236129](http://survey.acomp.usf.edu/survey/entry.jsp?id=1289147236129) will take you to the questionnaire.

Thank you for your participation in this pilot research project
Appendix F

Presentation to Participants

Welcome Colleagues,

My name is Alex Kumi-Yeboah, a graduate student from the Department of Adult, Career and Higher Education, College of Education, University of South Florida (USF) Tampa FL.

**Study Title:** Factors that Promote Transformative Learning Experiences of International graduate-level learners

**Purpose of the Study:**

The purpose of this study is to examine factors that Promote transformative learning experiences of international graduate-level learners.

1. Research will explore ways international adult learners transform new learning to past experiences in connection with the factors that promote transformative learning.

2. Research study will address the relationship between the factors that promote transformative learning and the demographic characteristics, and degree programs of the international graduate-level learners.
Appendix F Continued

Benefits of the Study

1. The outcome of this study will contribute to knowledge of transformative learning of international graduate-level learners experience as related to their demographic origins, degree programs, and how they learn new connections in the new environment.

2. Study will provide valuable data to faculty and adult educators regarding which learning activities or strategies to use in the classroom to help international graduate-level learners reflect and contribute in class discussions as well as help these educators revise their syllabi to suit their needs.

Population and Sample

Target population will consist of international graduate-level learners with the status of Full-time or Part-time student with (F1 or J student visas) as required by the university. The target population will not include international graduate-level learners’ whose visa status has changed or have since become naturalized United States citizens.

Participants will include international graduate-level learners from the colleges of (a) Engineering and (b) Arts and Sciences.

Expectation:

1: As a participant, you will provide answers to eleven questions about your learning experiences both within and outside of USF and 10 questions on demographic information in a hand delivered copy version of the *Learning Activity Survey*. 
Appendix F Continued

2: Questions in the questionnaire are the modified format of the *Learning Activities Survey* instrument developed by Dr. Kathleen King (1997) on transformative learning.

3: As a participant, you will have the opportunity to read and understand this information about the research study and answer all questions. The office of the IRB (USF) has approved the study.

4: For any questions that you may have about the study, you will have the opportunity to contact the Principal Investigator.

5: As a participant, you understand that you are being asked to participate in research. You understand the risks and benefits, and you freely give your consent to participate in the research project outlined in this form, under the conditions indicated in it.

6: At the end of the survey, I will need about 6 volunteers one from each geographical region and degree program to participate in an interview that will last for about one hour.

**Ethics**

1. In compliance with the Institutional Review Board (IRB) at the University of South Florida, all ethical concerns will be followed.

2. As a participant of this study, you will be assured of your confidentiality. Again, all study data such as interview audio-tapes, survey electronic files, and transcripts, will only be accessed by the principal investigator at the ACHE office, College of Education, USF Tampa FL and will be destroyed after a period of 5 years as required by the IRB.
Appendix G

Institutional Review Board Approval Letter

February 7, 2011

Alex Kumi-Yeboah
Adult, Career and Higher Education

RE: Expedited Approval for Initial Review
IRB#: Pro00002750
Title: Factors that Promote Transformative Learning Experiences of International Graduate Level Learners: A Pilot Study

Dear Alex Kumi-Yeboah:

On 2/5/2011 the Institutional Review Board (IRB) reviewed and APPROVED the above referenced protocol. Please note that your approval for this study will expire on 2-5-12.

Approved Items:
Protocol Document(s):

Factors that Promote Transformative Learning Experiences of International Graduate Level Learners: A Pilot Study 11/30/2010 7:19 PM 0.01

Consent/Assent Documents:
Name Modified Version
Waiver of Informed Consent Documentation on the Adult Min. Risk ICF
It was the determination of the IRB that your study qualified for expedited review which includes activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the categories outlined below. The IRB may review research through the expedited review procedure authorized by 45CFR46.110 and 21 CFR 56.110. The research proposed in this study is categorized under the following expedited review category:

(6) Collection of data from voice, video, digital, or image recordings made for research purposes.

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Your study qualifies for a waiver of the requirements for the documentation of informed consent as outlined in the federal regulations at 45CFR46.116 (d) which states that an IRB may approve a consent procedure which does not include, or which alters, some or all of the elements of informed consent, or waive the requirements to obtain informed consent provided the IRB finds and documents that (1) the research involves no more than minimal risk to the subjects; (2) the waiver or alteration will not adversely affect the rights and welfare of the subjects; (3) the research could not practicably be carried out without the waiver or alteration; and (4) whenever appropriate, the subjects will be provided with additional pertinent information after participation.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval by an amendment.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

John Schinka, PhD, Chairperson
USF Institutional Review Board

Cc: Various Menzel, CCRP
    USF IRB Professional Staff
About the Author

Alex Kumi-Yeboah was born and raised in Ghana, West Africa and earned a Bachelors degree in Social Studies Education from the University of Cape Coast, Ghana. He received his Master of Arts in Social Sciences Education from the University of South Florida in 2004. He has been a faculty member at Wiregrass Ranch High School in Pasco County Florida since 2007.