

**Qualitative Meta-Data Analysis:  
Perceptions and Experiences of Online Doctoral Students**

**By**

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**Abstract**

The profiles of online and traditional doctoral students contrast sharply. A traditional doctoral student lives on campus and pursues the degree in a face to face environment. This meta-data analysis peruses the research findings from primary research studies on online doctoral students. A systematic search of qualitative research articles, that presented the personal perspectives of online doctoral students, was examined to identify common properties in isolated studies. Factors that directly impact the ability of doctoral candidates to be successful in their online doctoral degree program were identified. Positive factors included cohort groups, supportive mentors, and the ability to pursue a doctoral degree. Obstacles faced by doctoral online students included balancing work, family, school, and a sense of isolation. The results of this meta-data analysis will provide higher education with insights into the online doctoral students' perceptions and experiences.

**Keywords:** *adult learners, distance learning, e-learning, meta-data analysis, qualitative studies, online education, postgraduate, professional doctorate, student experiences, virtual universities, and higher education.*

## **Introduction**

Researchers reported a shift in doctoral student population demographics (Bolliger & Halupa, 2012; Offerman, 2011). Traditionally, doctoral students were male, single, studying full-time and working for a university that would subsidize their tuition as they worked toward a terminal degree (Offerman, 2011). The nontraditional student has become increasingly female, studies part-time, is a working professional, and is self-funded (Kumar, Johnson, & Hardeman, 2013; Offerman, 2011). The shift from traditional to non-traditional has expanded because of advances in technology, changes in workforce needs, and the development of a global economy (Evans & Green, 2013). Technology has enabled students to work online, pursuing an education to support a desire for professional knowledge and skills. Workforce needs have changed, and doctoral degrees are in high demand in fields such as education and health (Evans & Green, 2013). Additionally, the shift to a global based economy requires people to produce new knowledge and has precipitated the need for an increasing number of educated professionals. Understanding the perceptions and experiences of online doctoral students can assist universities in developing educational practices that enable effective learning and insure doctoral success for non-traditional students. Many educational environments fail to address the multiple conflicts of family, work, and school faced by nontraditional doctoral students (Offerman, 2011). This meta-data analysis identifies some of the advantages of doctoral online learning and obstacles faced by the students.

## **Problem Statement**

Numbers of online education students have been gaining ground in the decade beginning with 2010. However, the online doctoral student is a new phenomenon (Offerman, 2011; Santovec 2013). There is a lack of clarity and insight related to the obstacles and advantages faced by these new nontraditional doctoral students (Erichsen, Bolliger, & Halupa, 2014; Koole, 2013). This meta-data analysis of current research précisés what has been learned about these students and provides future researchers with an integrated body of knowledge on online doctoral students.

## **Purpose Statement**

There has been research on online doctoral students which focus on student perceptions relative to satisfaction with and anxiety over their online doctoral program (Bolliger & Halupa, 2012); students' perceptions of online mentoring (Kumar, Johnson, & Hardemon, 2013); and how students should be prepared for online doctoral study (Koole, 2013). However, to date, no synthesis of the literature has been presented. The purpose of this meta-data analysis is to systematically reexamine the research to develop an integrated body of knowledge on the perceptions and experiences of online doctoral students. An analysis of primary research is crucial to understanding the online doctoral students' perceptions. The doctoral student's areas of concern and perceived areas of advantages are unique for distance educators, so universities can adopt practices that

ensure doctoral students' success (Evans & Green, 2013). Online programs "recognize the special challenges faced by these older students" (Offerman, 2011, p.29). This meta-data analysis provides an integrated body of knowledge on the concerns, and perceived benefits of pursuing a doctoral program online. The meta-analysis covers research from the last five years. The results are therefore relevant and timely. The analysis provides information to online doctoral students, administrators, teachers, and others involved in the education process.

### **Research Questions**

The experiences of online doctoral students are complicated on many levels both personal and professional (Gardner & Gopaul, 2012). The meta-data analysis evaluates data from qualitative research. Analysis of the studies provides aggregate data across studies of doctoral students' perception of their online learning experiences. The results of the study will provide better understanding of online doctoral students as well as provide data to develop plans to support this growing higher education population. The meta-analysis will specifically answer the following question: What are the perceptions and experiences of online doctoral learners?

### **Significance**

As society realizes the need for highly qualified educators to be actively working in the field of education it is imperative for individuals to seek a higher level of education such as that of a doctoral degree. With only about two percent of the overall population possessing a doctoral degree as reported by the United States Census Bureau in 2011 (Spren, 2013), the need for higher education is critical. Attainment of higher education prior to the online modality caused many individuals seeking this degree an impossible venture due to the responsibilities of life. Attendance through an online doctoral program of study has opened many doors for those seeking higher education where doors were closed in the past.

The information provided in this analysis provides robust body of knowledge on online doctoral learners. The meta-data analysis provides insight for instructors and administrator working with online doctoral students. For students considering obtaining a doctoral degree online, this analysis will help them be better informed as to whether this is a reasonable possibility for their existing lifestyle.

### **Conceptual Framework**

Important findings from evidence-based studies are being underutilized and qualitative meta-analysis is a means toward "enhancing the relevance and utility of qualitative research" (Sandelowski, 2004). Meta-data analysis, formally analyzes and compares primary data to develop a body of knowledge on a specific phenomenon (Paterson, Thornes, Canam, & Jillings, 2011). By comparing the findings of primary research

studies, common focus and common themes are identified. This meta-data analysis, extends the knowledge, brings clarity, and understanding of the perceived experiences of online doctoral students. Although attempts to understand the perceptions of online students have been conducted, few attempts to use meta-data analysis are evident (Sandelowski, 2004). This study is guided by Noblit and Hare (1988) approach. A well-known model for meta-data analysis.

### **Methodology**

Qualitative research is inherently flexible and is used in meta-data analysis to compare the perspectives of participants in isolated studies (Paterson et al., 2011). A literature review would limit us to summarizing prior research. Our intent was to integrate the data from qualitative studies to better understand the personal challenges and positive experiences of online doctoral students. Qualitative meta-data analysis provides understanding on how isolated research studies are connected (Paterson et al., 2011). The purpose of meta-data analysis is to identify and synthesize key themes in primary studies (Paterson et al., 2011; Schrieber, 2012). The goal of this qualitative meta-analysis is to compare and synthesize evidence-based statements from the perspective of online doctoral students to identify advantages and challenges faced by nontraditional doctoral students. Noblit and Hare (1988) identify seven phases in their meta-ethnography approach: Phase 1: Getting started; Phase 2: Deciding what is relevant; Phase 3: Reading the studies; Phase 4: Determining how studies are related; Phase 5: Translating studies into one another; Phase 6: Synthesizing translations; and Phase 7: Expressing the synthesis. The seven steps provide synthesis of previous qualitative studies and the focus is interpretation of the results of the studies reviewed.

### **Qualitative Meta-Data Analysis**

In meta-data analysis, the data is synthesized by comparing research with a common focus (Paterson et al., 2011). After, the initial literature search, more stringent inclusion and exclusion criteria were applied. Noblit and Hare's (1988) steps broaden understanding of the data collected from studies in the literature. Decision was taken during the various stage of analysis to make sure the team met the purpose of the study. From article selection to deciding what is relevant for the analysis. Of the thirty-five articles reviewed, only five focused on the perception of online doctoral learners. The careful assessment of each study adds validity to this meta data analysis. Synthesizing the findings give further meaning to the study.

**Phase 1-Getting started:** The team started the meta-data analysis by searching for studies that addressed closely identical research questions. Databases such as EBSCOhost, ProQuest, and ERIC were searched for relevant research on online doctoral students. The variables of interest include students' satisfaction, online doctoral students, adult learners, and students' voices within the studies in the literature. The articles are peer reviewed research studies from a variety of sources such as Ebscohost, ERIC, and ProQuest. Journals include *Assurance in Education*, *College Student Journal*,

*Contemporary Issues in Education Today, Distance Education, Higher Learning Research Communications, International Journal of Doctoral Studies, International Journal of Information and Communication Technology Education, Journal of Distance Education, Journal of Nursing Education and Practice, Journal of Technology Studies, New Directions for Adult and Continuing Education, Online Learning, Research in Learning Technology, Teaching and Learning, Understanding doctoral success factors in online education programs, and The Qualitative Report.*

Thirty-five peer-review journal articles published between 2011 and 2015, focusing on the perceptions of online doctoral learners were identified (see Table 1). Relevant research was selected by using only studies with actual student statements. Studies using author assertions was purposely left out. Non-online doctoral students' studies were also eliminated. This is because the experiences and perceptions of online students may be different from other doctoral students. Articles where participants were part-time and in blended programs were eliminated. If the article did not specifically say the students were online, then they do not meet the criteria for inclusion.

Table 1  
*Total Search Results*

Search Terms	Number of Articles
Online Doctoral Students	19
Non-Traditional Doctoral Students	4
Part Time Doctoral Students Experiences	8
Online Doctoral Students Perceptions	2
Online Doctoral Students Experiences	2
Total number of articles	35

**Phrase 2-Deciding what is relevant:** After the initial literature search, specific criteria for inclusion and exclusion were considered. Dissertations, reviews of research, books, and conference proceedings were eliminated. Research that focused on online doctoral programs from an administration, program, or instructor perspective were also eliminated. For this meta-data analysis, only qualitative research that included evidence-based statements from participants, as opposed to author assertions were considered. Five studies that answered the research questions and met the criteria of including empirical evidence of the perceptions and experiences of online doctoral students were analyzed.

**Phase 3-Reading the studies:** Five research studies meeting the relevant criteria were read repeatedly by all members of the team (See Table 2).

Table 2  
*Study Sample*

Authors of Studies	Sample Size	Country of Study	Ethnicities	Discipline
Andrew (2012)	3	Australia	2 New Zealand 1 Tasmania	Diverse Disciplines
Bolliger & Halupa (2012)	84	USA	61% Caucasian	Health and Education
Fahlman (2011)	8 Female 5 Male	Canada	Not Provided	Education
Kumar, Johnson, & Hardemon (2013)	9	USA	Not Provided	Not Provided
Provident, Salls, Dolhi, Schreiber, Matilla, & Eckerl (2015)	113	USA	Not Provided	Occupational Therapy

The number of participants in the studies ranged from as little as three to as many as 113. Participants in all five studies were adults returning to school for obtaining either a PhD or EdD degree. Fahlman (2011) reported on the number of males and females. Two studies Andrew (2012) and Bolliger & Halupa (2012) provided information on the ethnicity of the participants. Three studies were done in the United States, one in Australia, and one in Canada. Bolliger and Halupa (2012) piloted their research instrument before delving into the data collection phase and determined internal reliability at .92 (p. 86). Preliminary code definitions were developed, re-examined, and revised in Provident et al.'s (2015) study.

***Phase 4-Determining how studies are related:*** We extracted data from each of the studies. The team identified key metaphors, ideas, and concepts used in each study. The selected five studies explored the perceptions and experiences of doctoral students in varying disciplines. The purpose of the studies ranged from identification of the challenges faced by distance doctoral students to barriers and challenges participants face while pursuing their program. Table 3 shows how the purpose of the study and design are related to each other.

Table 3  
*Summary of Aspects of the Studies*

Author	Purpose	Research Design	Data Collection Method
Andrew (2012)	Describe the challenges faced by distance PhD students and investigate the skills needed for mediating distance supervisors and students.	Case Study	Response to five questions
Bolliger &	To determine doctoral students' technological anxiety and	Mixed method. Qualitative and	Three open ended questions

Halupa (2012)	satisfaction with the online environment.	Correlational Design.	
Fahlman (2011)	To provide a legacy for future doctoral students.	Qualitative	Storytelling
Kumar, Johnson, & Hardemon (2013)	To identify mentoring strategies used throughout students' online doctoral program.	Phenomenology	Semi-structured interviews; 7 participants interviewed by telephone and 2 participants interviewed in-person
Provident, Salls, Dolhi, Schreiber, Matilla, & Eckel (2015)	Further the understanding of how curricular structure contributes to transformative learning experiences for students at the end of their doctoral program.	Qualitative Analysis	Student written capstone project reflections

Though some studies investigated students' anxiety relative to technology and satisfaction within the online environment (Bolliger & Halupa 2012). Some studies specifically explored online mentoring strategies (Kumar, Johnson, & Hardemon 2013). Provident et al.'s (2015) study furthers the understanding of how curricular structure contributes to transformative learning experiences for students at the doctoral level. In general, the studies describe the challenges faced by distance doctoral students and investigates the skills needed for mediating distance supervisors and students (Andrew, 2012). Fahlman (2011) hopes his study will provide legacy for future doctoral studies.

**Phase 5-Translating studies into one another:** In this phrase, we gradually started synthesizing the studies by first protecting the individuality of each study. The five studies reviewed used qualitative methodologies. One study was mixed methods, however, only the qualitative data was used for this meta-analysis. Bolliger and Halupa (2012) used anxiety and satisfaction questionnaire and computed correlation coefficients. The results show that "students with lower technological anxiety scores experienced higher levels of satisfaction in the online environment than learners with higher anxiety scores" (Bolliger & Halupa, 2012, p. 11). The qualitative studies used designs such as Case Study and Phenomenology. One of the qualitative studies collected data through storytelling (Fahlman, 2011). Andrew's (2012) case study collected thematic data grounded in the literature review of five questions. Kumar et al.'s (2013) study used the phenomenological designs, using face to face and phone interviews. Provident et al.'s (2015) qualitative analysis reviewed and coded students' capstone project reflections.

**Phase 6-Synthesizing translations:** The next phrase is looking for another level of analysis. Looking for common themes and key words that run through the five studies. Common themes in the isolated studies were identified and a cross analysis was completed to identify the key themes as depicted in the findings.

**Phase 7: Expressing the Synthesis:** Using thematic analysis of the metaphors, ideas, concepts, and key words we discussed common themes that ran through the five studies.



## Findings

***Primary Advantages and Obstacles of Doctoral Online Learning:*** Participants in the five studies rejoined that online learning was a positive experience with some degree of differences as to what is deemed a positive experience (see Table 4).

Table 4  
*Primary Advantages and Obstacles*

<b>Articles</b>	<b>Advantages</b>	<b>Obstacles</b>
Andrew (2012)	Students noted the importance of being able to stay at their place of employment and in their community as an advantage.  Students found the face to face meetings important.	Students identified not having access to a community of peers for discussion and support with research, as a challenge.
Bolliger & Halupa (2012)	Flexibility of the online environment.	Not provided.
Fahlman (2011)	Peers provided a safe environment to ask for help and not be judged.  The strong bond and support from the cohort aided their journey.	Balancing all life commitments. Working with students that might not provide as much support as other students.
Kumar, Johnson, & Hardemon (2013)	Multiple modes of communication - email, telephone, VOIP, and virtual classroom. Structure provided by the mentor.  Timely, clear feedback from mentors was valued. Peer support helped them stay motivated. Students found it important to make time for their family members and to take breaks when needed.	Not understanding written feedback.  Finding time to write; time management - handling family and work commitments.
Provident, Salls, Dolhi, Schreiber, Matilla, & Eckerl (2015)	Students felt the cohort structure was important in providing shared experiences and ongoing opportunities to interact with instructors and other students.  Students commented on new directions for the career and new professional goals because of the program.	Students were uneasy at the beginning of the program and continued to feel anxiety. However, faculty encouragement supported students and helped them finish the program.

Study participants commented on new directions for their careers and new professional goals as a result of the program (Provident et al., 2015). Being able to work full time and complete a degree was identified as a major advantage (Andrew, 2012; Bolliger & Halupa, 2012). Fahlman's 2011 study is based on the experiences of a 13-member cohort group enrolled at Athabasca University (AU). The stories of the students provide examples of positive experiences of online doctoral students. The fostering of motivation

and support that AU espouses appears to play a role in these positive experiences based on the use of cohort groups. At the beginning of the cohort, members are brought together for a week-long face to face orientation period. The initial contact and orientation are used to create a “foundation” for the group. It appears that the participation in the cohort group supplied the focus of the positive experiences of the students. Working collaboratively with teammates kept students going when they began to feel overwhelmed in attempting to maintain a balance between home, work, and school life. Students also said the peer support helped to offset feelings of isolation in the online modality. Being in a cohort program was perceived as an advantage (Provident, et al., 2015). Peer support (Fahlman, 2011; Kumar et al. 2013); and new challenges (Provident et al., 2015) were deemed important and positive experiences.

Support from dissertation chairs and mentors were helpful. Bolliger and Halupa (2012) conducted a research to understand course anxiety and satisfaction among 84 online health education doctoral students. Participants perceived that their anxiety levels decreased when they got timely feedback and responses to questions from their instructors and mentors (Bolliger & Halupa, 2012). Kumar et al. (2013) conducted research on a doctoral program at a university that offered classes in an online modality combined with a one-week campus-based session held annually. Twelve students were interviewed who graduated from the program in 2011 and 2012. The students shared that while structure provided by the mentors was helpful, they believed that “dialog initiated and consistently maintained by mentees is as important for a successful online mentoring experience” (Kumar et al., 2013, p. 10).

Participants also expressed some concerns. Work-life balance was problematic (Fahlman, 2011; Kumar et al; 2013). In Kumar et al.’s (2013) study, all students were working full time and found it hard to find time to work on their proposal and dissertation. Students in the Andrew’s (2012) study felt not having access to peers for support was challenging. Additional obstacles included not understanding written feedback (Kumar et al., 2013). In spite of the obstacles, participants were resilient and stay with the program to attain their degree.

Synthesizing the data indicated positive factors such as cohort groups, supportive mentors, multiple mode of communication via technology and the flexibility to pursue a doctoral degree. Obstacles faced by doctoral online students included, difficulty understanding feedback, balancing work, family, school, and a sense of isolation. The positive experiences outweighed the negatives, and therefore increased the likelihood of students continuing their degree in the online modality.

***Thematic Analysis:*** With further analysis, the following themes emerged - peer support, faculty support, technology, loneliness or the human factor, and time management (see Table 5).

Table 5  
*Main Themes*

Themes	A	B	F	K	P
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Themes	A	B	F	K	P
Flexibility	Flexibility of remaining in their place of employment, family, communities and networks	Flexible for already busy lives with work and family.	Allows to juggle multiple roles.  Support from family helped.	Full time employees with families so the online structure helps.	Allows to take the role of student and full-time employee.
Peer Support	Need Regular E-community or online conferencing	Valued discussion with other students in similar situation valued	Strong support group within cohorts. The encouragement to share in online discussions helped to move forward in the program with confidence.	Appreciated that they can share, and partner with peers.	Program cohort structure provided shared experiences.  Student cohorts provided support to each other during challenges and triumphs, even in personal matters.
Faculty Support	Need regular scheduled e-meetings.  All students mentioned the importance of meeting with their academic supervisor. One student mentioned the importance of talking to people in her workplace.	Satisfied with timely feedback, support, and openness.  Interaction with instructor and peers was deemed important.	Academic support for writing	Appreciate receiving timely feedback and the variety of online communication.  Online mentors provided support and guidance in educational development and other matters.	Faculty encouraged and supported students.
Technology	Value Online conferencing where students can read, write, and speak. But advocated for E-media such as skype and Face to Face Meetings.  Needs Electronic resources on both institutional and discipline support level.	High technology anxiety at the beginning of the program which become Low to moderate anxiety with technology at the end.	NP	Valued the use of multiple technologies and media such as emails, telephones, skype, Elluminate, screen sharing, CrossLoop etc.  Appreciated resources links provided by mentors	NP

Themes	A	B	F	K	P
Loneliness - The Human Factor	Loneliness at the dissertation writing stage - No access to community of Scholars.	More interaction to get to know peers better	Lonely nights in front of a computer	Implementing research without face to face support with faculty and peers was a challenge.  Sometimes they did not understand written feedback from mentors.	Transformational learning that reflected changes in personal, cognitive, and behavioral development.
Time Management	NP	NP	Finding a balance between competing demands and multiple rules.	Sometimes a challenge to find time to write or work on their dissertations because of family commitments.	NP

Key: A=Andrew (2012); B=Bolliger & Halupa (2012); C=Fahlman (2011); K=Kumar, Johnson, & Hardemon (2013); P=Provident, Salls, Dolhi, Schreiber, Matilla, & Eckel (2015)

NP: Not Provided in study results

*Flexibility:* Flexibility with the online degree is an important theme that ran through the five studies. Participants perceived online learning as flexible, convenient, and conducive to maintaining personal lives (Provident et al. 2015; Bolliger & Halupa, 2012). Students were positive about being able to stay at their place of employment and in their own community without having to travel or drive to obtain a degree. Being able to work full time and complete a degree was identified as a major advantage. Students also felt it was an advantage to be able to work anytime and anywhere to pursue a doctoral degree. Doctoral candidates make sacrifices in the form of long hours and time away from family; also make compromises to balance all their many roles. They see the online platform making it easier to achieve their degree.

*Support Structures:* Support takes three forms-support from mentors, classmates, and family. Participants identified the importance of support from dissertation chairs or mentors. Although support from family was mentioned, far more important was support from classmates and faculty. Students in cohort groups identified the cohort as providing positive peer relationships and a “safe” group to go to for help (Provident, et al., 2015). Participants value peer support. They believed peers help them stay motivated (Kumar, Johnson, & Hardemon, 2013). Such support is consistent with stories from a cohort of doctoral students who shared that the strong bond and support from other students helped them work together to support each other (Fahlman 2011). As a cohort group, they discovered that some students were good with writing and some with APA format. They discovered each other’s strength and helped each other using their individual strengths. They also shared with peers how they cope with a wide range of life commitments such as “family, jobs, and social obligations” (Fahlman 2011, p. 6). The stories shared ranged from academic knowledge and laughter to building long lasting friendships. Making time

for family and taking breaks when needed helped students in completing doctoral dissertation online (Kumar et al., 2013).

*Technology:* Attaining their degree require the use of technology. High technology anxiety at the beginning of the program became low to moderate technology anxiety at the end (Bolliger & Halupa, 2012). Students felt multiple modes of communication, email, telephone, virtual classrooms, were important to their program (Kumar et al., 2013). Participants advocated for more online resource links

*Loneliness -The Human Factor:* Being alone especially during the dissertation writing stage was problematic for participants in Andrew's (2012) study. They advocated for e-media such as skype and face to face meetings (Andrew, 2012). Participants identified anxiety as continuing throughout the doctoral program, although some students reported less anxiety as the program progressed. Students stated face-to-face meetings and faculty encouragement helped to lower anxiety. Timely feedback from mentors also lowered students' anxiety (Bolliger & Halupa, 2012).

*Time Management:* In some of the studies, participants shared negative perceptions in relationship to their online learning experience much of these stems from the ability of the students to manage their life while trying to attain a terminal degree. Being able to do so in a successful manner requires not only commitment from the learner but also devotion by family members and significant others in relationship to the success of the learner. The amount of time, energy, dedication, and commitment to a doctoral degree program of study in the online venue is astronomical in relationship to a daily regimen that more than likely includes caring for family members, working, and schooling. Due to the demands that are put on the time of individual enrolled in an online doctoral program there are never enough hours in the day to accomplish the tasks at hand (Fahlman, 2011). Participants felt their multiple conflicts of family, work, and school were not being recognized by school faculty. In one study, all the students were working full time in their professional fields and found it hard to find time to work on their proposal and dissertation (Kumar et al., 2013). The time required for study and learning can ultimately lead to shortchanging oneself in meeting physical and social obligations that are critical for life existence.

### **Discussion**

Four common themes emerged from the synthesis of the data. These themes include flexibility, peer support, faculty support, and loneliness.

*Flexibility:* Participants discussed juggling "multiple roles" such as mother, wife, professional, and student (Fahlman, 2011). Results mirror findings of studies that were not specifically online learners like that of West et. al. (2011), where students found no difference between their professional work days and studying for their degree program. A concern for finding time and energy for family, job, and school was identified in other studies including Smyth et al. (2012) where participants were in a range of blended learning programs. Gardner and Gopaul (2012) reported the frustration of students trying to balance professional work and school related work. Offerman (2011) identified challenges faced by older nontraditional students such as caring for aging parents, ending a marriage, and death of a close family member. He also reported that women doctoral students take on more responsibility for the home and for child care responsibilities than

their male colleagues. Research by Brock and Hawkins (as cited in Santovec, 2013) found a difference between the concerns of men and women in a pre- and post-course semester survey. The survey found out that although men were initially concerned about needing support, they settled into a balanced life after the first or second semester. Women, initially concerned about juggling school, job, and family, reported increased concerns in the post course survey.

*Support:* The development of classmate social networks was important for supporting students beyond what dissertation chairs, committees, or families could provide (West et al.). These social networks are particularly important in the transitional period between structured core courses and independent work on the dissertation. The cohort structure used in some of the selected studies (Fahlman, 2011; Kumar et al, 2013; Provident et al. 2015) was found to have the same effect on students in similar studies like those of Gardner & Gopaul (2012), Santicola (2013), Smyth et al. (2012) and West et al. (2011). These studies also reported cohort grouping is a positive source of support for students.

Support based on students' perceptions include valuing timely communication and feedback from mentors (Andrew 2012; Bolliger & Halupa 2012; Kumar et al. 2013), however there was not an overriding method of communication and feedback that stood out. Timely communication between the student and their advisor is a critical predictor for successful completion of the dissertation program (West et al., 2011). A mentoring program, typically one that includes a cohort group, was found to create a positive experience for online doctoral students (Brill, et.al, 2014). Belonging to a cohort can cut down on confusion that a student may feel relative to learning in the online modality. A dedicated program for mentoring can go a long way in facilitating positive student outcomes. Also, a sequential structure of completing the dissertation could be very helpful.

*Loneliness:* The theme of loneliness emerged with adverse elements. Some participants identified a lack of community and a sense of isolation, with nobody to talk to about their doctoral program as a challenge. The Human Factor is a two-edge sword. Participants have their family but feel lonely because they are physical detached from their academic support. Students miss peer interaction and regret not having the closer relationships they might have with peers and faculty in a face-to-face program (Gardner & Gopaul, 2012). Many online students depended on support from the people they work with and/or from family members.

### **Validity and Limitations**

The validity of the study was ensured by describing the process of the meta-data analysis based on the work on Noblit and Hare (1988). The strength of the synthesis is the multiple case studies reviewed for a broader understanding of the perception and experiences of online doctoral students. This meta-data analysis was limited to studies published in peer reviewed journals between 2011 and 2015, the time frame narrowed the number of studies available for analysis. The analysis is therefore limited to the data available from the five qualitative studies.

Even though articles were narrowly selected to those who best fit the profile of study, the initial studies had some sampling limitations. The sample size of some of the studies were very small, for example Andrew (2012) had only three students. Some studies collected data from one institution or one program within an institution. All five studies were done in three countries: USA, Canada, and Australia. The results are therefore limited to students, disciplines, and the countries of study. It is important to continue to investigate copious ways to understand and support online doctoral students. We suggest expansion that employs methods.

### **Conclusion and Recommendations for Future Studies**

This meta-data analysis examined five studies to understand the perceptions and experiences of online doctoral students. The study provides a concise analysis of the studies. Students seemed to share the same concern as on-ground students. They share the same challenges that other online master's degree and continue education students face. Arguably, those students also face the many challenges of studying in the online environment. They too face the balance between work, family, and study. Online doctoral students face the many challenges that regular full time adult doctoral students returning to graduate school face, such as family, kids, parents, the desired for more practical knowledge than theoretical frameworks, among others. The non-traditional online doctoral students have a slightly different support system from the full time on-campus student. They value interaction with peers and instructors and see them as a very important support system. The human factor was an identifiable missing link. Institutions offering online doctoral programs need to insure students are receiving the interactive support they need to complete their programs.

The analysis provides an intuition of the areas of concern and perceived advantages of pursuing a doctoral program online. Research regarding online doctoral students requires more attention as more universities are providing online options. One recommendation is that larger studies be completed that include diverse student population and disciplines.

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