A Tapestry of Educational Technology Women Leaders in Higher Education: A Qualitative Study

Jane Braaten Overmoe
overmoej@gmail.com

United Tribes Technical College
Bismarck, North Dakota, USA

A qualitative study was used to understand the experiences of twelve Women Education Technology Leaders in Higher Education. Through the interviews, women leaders described the environment as well as personal and behavioral aspects of their work. Findings included the descriptive concepts of relationships, leadership, persistence, and advice. Relationships were from workplaces and professional networks, leadership was defined by vision and teamwork, persistence was addressed by either values-based or through relationship-based. The fourth thread advice was divided into three sub-threads: educational, family (both personal and work) and managing emotions. A qualitative approach was used to highlight interview responses to demonstrate the experiences of Women Education Technology Leaders in Higher Education.

Keywords: educational technology leaders, higher education leadership, women leaders, gender discrepancy

Introduction

In the world of higher education today, there are Educational Technology leaders whose voices and whose stories beckon to be told because the field is relatively new. Women Educational Technology leaders could be instructional designers, learning management system administrators, or distance education leaders who follow many different types of Educational Technology career paths. Women Educational Technology professionals connect with all levels in higher education because of the systematic workings of technology in this ever-changing academic world. What are these women leaders experiencing while working multiples roles? Due to the lack of research about women in these roles, this study intends to ask women about their experiences and interweave a 21st century tapestry.

In a simple world, a tapestry would be viewed and admired, perhaps adorned on a forgotten wall. But, in a more complex world, this paper's tapestry becomes a living tapestry, with voices from women leaders who work in Educational technology across our nation's college campuses. Their stories and descriptions form a blend of women's career trajectories to present day technology practices, to emotional displays from dismay to humor, creating an interweaving capture of their experiences; a tapestry, full of advice, relationships, leadership and persistence.

Literature Review

Three areas are included in this study about experiences of women leaders in Educational Technology in higher education. Guided by Bandura's (1986) Self-Efficacy Theory and using behavioral, personal, and environmental characteristics, this literature review is organized around: (a) women students in Educational Technology disciplines, (b) women in Educational Technology as a career field, and (c) women leaders working in Educational Technology in higher education. Figure 2 communicates relationships between topics reviewed for this study. In Figure 2, personal characteristics include gender issues, anxiety issues, goal setting, self-advocacy, continuing education, and job fulfillment. Behavioral characteristics include social isolation, how women navigate chilly climates in higher education, communication styles, relationship building, positive and/or negative actions that occur, and persistence. Environmental characteristics include filling pipeline issues, equity issues along a career path, work place setting, home issues, conferences, professional development, and institutional challenges women may face.

McCoy (2010) sought to learn about undergraduate students' use of technology and self-efficacy in using technology. The research has shown that high levels of self-efficacy are associated with positive self-concepts, use of high level learning strategies (Wang, Wu, & Wang, 2009), expectations of success, and perseverance in an activity (Puzziferro & Shelton, 2009). Additionally, low levels of self-efficacy are associated with negative self-concept, anticipation of

failure, and reluctance to attempt tasks (Hsieh, Cho, Liu, & Schallert, 2008).Stoilescu and Egodawatte (2010) examined how women students feel isolated, have reduced confidence, and underperform in one type of technology undergraduate major (computer science) Stoilescu and McDougall (2011) also studied students in undergraduate computer science programs and how male and female students differed.

Hargittai and Shafer (2006) wanted to test gender abilities with navigation of online content. Wajcman (2010) provided an overview of various approaches that link gender with technology through a qualitative study that used a feminist perspective to consider what technology means to women from multiple perspectives (i.e., education, training, and professional experience). Herring and Marken (2008) investigated the effects of gender consciousness among students enrolled in Instructional Technology programs at five U.S. universities. Dakers, Dow, and McNamee (2009) explored perceptions about technology and technology education by secondary students in the U.S. Kekelis, Ancheta, and Heber (2005) investigated what young girls thought of technology projects in order to spark interest in the field of Informational Technology or computer science. Esch (2010) analyzed men's and women's perceptions of social isolation in the Educational Technology workplace. Coder, Rosenbloom, Ash, and Dupont (2009) completed a qualitative study examining why women do not choose Information Technology careers. Demaiter and Adams' (2009) study examined experiences of 11 women in the Information Technology field who had successful careers, proven by advancement and promotion.

Ahuja and Thatcher (2005) provided a study with empirical evidence for the effects of work–family conflict, perceived work overload, fairness of rewards, and job autonomy on organizational commitment and work exhaustion. Trauth and Howcroft (2008) discussed two dominant theoretical viewpoints currently reflected in the majority of literature about gender and Educational Technology: essentialism and social construction. Klein (2000) found relationships between "women in technology" and "management roles." Cone (2007) examined why women left Educational Technology jobs in the 2000-2010 decade. It was a short article with a brief survey asking respondents to give the top three reasons they left the Educational Technology field. Orser, Riding, and Stanley (2012) published a study conducted by Canadian Women in Technology (CanWIT), concluding that gender discrepancy in the technology sector may be far worse than many have realized. Cater-Steel and McDonald (2001) provided insight for other groups who address the imbalance of women in traditionally underrepresented disciplines. Griffiths, Moore, and Richardson (2007) examined some of the work issues faced by women Information and Computer Technology (ICT) professionals.

All of the above studies found results that could involve student in field, career female in field and women leaders in field.

Methods

A qualitative inquiry approach was used for this study relying on two rounds of interviews with women Educational Technology leaders in Higher Education to collect data. After receiving approval for the study from the Institutional Review Board at my home institution, I recruited participants for the interviews. Prior to the first interview, I requested and received resumes from all participants to supplement my understanding of their professional and personal backgrounds. All but two sent resumes and the remaining participants allowed me access to their resumes via LinkedIn, a business and professional online directory.

In the first round of interviews, I interviewed 12 women who held leadership positions with responsibility for Educational Technology functions at higher education institutions. The first interview included discussion of a consent form and signature followed by the interview questions and recording of responses. I then conducted follow-up interviews with eight participants. The questions asked in the follow-up interviews evolved from remarks made by participants during the first round of interviews. Both rounds of interviews were conducted and recorded mainly via video conference and transcribed using a software application. For backup, when video conferencing did not work, I used a cell phone with software applications instead of a laptop to interview participants. Three times wireless video conferencing via my laptop did not work, so then I used a software application on my cell phone. I was able to record video as well as screen capture using software applications on my phone. Through the two rounds of interviews, authentic experiences of women Educational Technology leaders in higher education unfolded.

The population for this study was women Educational Technology leaders in higher education who were members of the nonprofit organization, EDUCAUSE. There are numerous types of positions in Educational Technology, but this study focused on women in roles that leant support to online curriculum, such as learning management developers, directors of instructional design, a distance education coordinator, or leaders of online learning.

As an organization, EDUCAUSE's mission is to advance higher education through the use of information technology. EDUCAUSE was used to recruit participants for my study because there is an EDUCAUSE listserv specifically for women in Educational Technology. To be able to access the listserv, I joined EDUCAUSE and became a member of the listserv 6 months before interviews were conducted. Access was not granted right away. It took 3 months of phone calls and emails before I received an email allowing me to discuss my study with someone via telephone. So, I called a director, and we discussed the study. At that time, EDUCAUSE did not use a permission letter to approve my study. The director said it would be possible to send a group email to the Women in the Information Technology sub-group on the EDUCAUSE listserv. I contacted the IRB office at my home institution to see if this research protocol would be permitted, and it was approved. After 5 months, the study moved forward.

The listserv participants began to respond to my initial email. Job titles of respondents included Administrative or Managerial, Director, Associate Director, or Manager. Some of the specific job titles included Distance Education Director, Director of Instructional Design, Associate Director, Program Manager, and Director of Learning Management Systems, among others. Gender was determined by name and information found in EDUCAUSE profiles (where available). Also, in the EDUCAUSE database, membership was considered as a proxy for determining persistence and/or longevity at the workplace by the membership years in the organization. Through this process, I identified 150 potential participants for my study.

My goal was to identify 12 women for participation in my study for the first round of interviews and eight women for the second round of interviews. I emailed prospective EDUCAUSE participants, gave them information about the study, and asked if they were willing to become involved in the study. After the initial email and participant acceptance period, I did a follow up with Doodle online scheduling software to schedule online interviews. This recruitment phase lasted approximately 10 days.

Twenty women answered my email and 15 sent back resumes and signed consent forms. Three women dropped out of the interview process. The eight women for the second round of interviews were selected because they responded that they would be available and that they would schedule a second interview After sharing my research protocol with selected participants, I began the interview process to determine experiences of women in their various leadership roles in Educational Technology.

Results

As transcripts were reviewed, threads of common discussions began to surface from participants' experiences in higher education leadership roles in Educational Technology. Table 1 offers a summary of common threads and categories that emerged during analysis of participant interview data.

Table 1.
Common Threads and Categories

Threads	Categories
Thread 1 – Relationships: Participants shared how mentorships from the beginning of their careers to developing talent at the time of their interviews evolved into continued working relationships.	Network Workplace
Thread 2 – Leadership: Participants described how their own individual unique leadership evolved through the course of their career.	Vision Teamwork
Thread 3 – Persistence: Participants discussed how persistence kept their career track moving forward with or without steps backwards.	All-in-One
Thread 4 – Advice: Participants discussed advice given to them from early times through their work in the field at the time of their interview and what advice they would give a woman entering a leadership position in Educational Technology in higher education.	Educational Advice Remembering Your Roots to Leaving a Legacy Managing Emotions

Implications or Discussion

The findings may inform women leaders in Educational Technology in higher education about relationships, education, administrative practices along the career path. There is a tremendous growth in technology, especially with online presence with higher education today. The participants are building foundations, relating experiences and sharing what will help others in the future. I believe this study illuminates those stepping stones for future research as well. With that said, implications for relationships, education and administration are discussed.

Relationships at the workplace are vital to these women and it may create a handbook or to do list of how to succeed or how to persist. Networking also became a vital link for campus and off-campus relationships for these women. The last finding about continuing education early on was mentioned by several participants in order for the job to go more smoothly and higher rankings at the university.

Another finding was how important education was for these participants in a variety of majors at three levels, bachelors' masters and terminal degrees. The participants consider how critical it is to keep updated with Educational Technology and to join professional organizations. They felt the need to explore other campuses online to view what it happening with peers. They also declared a need for knowledge with the latest technology that will be available to them so that students succeed at their campuses.

I think participants were careful with discussion about administrative practices for their work area for several reasons. One reason would be in case of retaliation for saying something that might not be in favor with the boss. Another reason could be the type of interview question posed. But, I think the participants have other reasons as well that were not discussed but could be their reality. One may be job security with all the changes and cuts to budgets occurring in higher education. Another could be that they may not have much contact with administration on a day to day basis. A few participants mentioned deans and meetings but in the siloed-world of academia, there may implications for what kinds of relationships are happening with administration and women leaders in Educational Technology. This relationship was never really discussed and may prove to another aspect for future study. Because the parameters of the study were followed, the gaps became apparent for more research. There is still groundwork to be done for women who underrepresented at administrative meetings and perhaps, undervalued for the tremendous work they are doing.

Conclusion

This journey has really just started for women, when I think about the tapestry woven by participants and their willingness to share their voices, their stories, their weavings, and their unravelings. First, I learned that there is more to learn about their leadership abilities and how women are learning to lead. Secondly, the complexity of the higher education institution in today's world let me witness the patterns participants set for themselves, for their staffs, and for their institutions. Third, participants' stories contained many threads, were multi-faceted, and brought many perspectives about transformational practices and important skill sets for future Educational Technology women leaders. Finally, participants emphasized particularly how important persistence is in our uncertain world and how leaders should continue to build the legacies they have been laying foundations for.

I leave the reader with words from Carole King's title song, "Tapestry."

> *She moved with some uncertainty*
> *As if she didn't know*
> *Just what she was there for*
> *Or where she ought to go*
> *(King, 1971/1999, track 11)*

My hope is that this study shed a brief illumination upon that 21st Century tapestry that describes working women leaders in Educational technology in higher education.

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