

Online graduate students' perceptions of best learning experiences

Peggy C. Holzweiss*, Sheila A. Joyner, Matthew B. Fuller, Susan Henderson, and Robert Young

Department of Educational Leadership and Counseling, Sam Houston State University, Huntsville, TX, USA

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The purpose of this study is to examine the perceptions of online master's students regarding their best learning experiences. The authors surveyed 86 graduate students concerning what helped them learn in the online environment. Results indicate that although graduate students learned using the same technological tools as undergraduates, they desired a deeper level of learning that requires more instructional forethought and planning. Student experiences were consistent with the constructivist theory, and implications for improving teaching based upon the constructivist theory are highlighted.

Keywords: distance learning; online learning; community of practice; critical thinking; teaching techniques

Introduction

Technology has become an integral part of the American higher education system. Offering online courses and entire programmes via the internet is now part of the fabric of college and university life in the USA and other developed economies. Online learning has become such an essential part of higher education that 66% of institutions of higher education include online learning as a critical part of their long-term strategy (Allen & Seaman, 2014).

According to the 2014 “Grade change: Tracking Online Education in the United States” report (Allen & Seaman, 2014), the number of students taking at least one online course during the fall 2012 semester surpassed 7.1 million. The United States Department of Education (2014) estimates that almost 30% of students enrolled in distance education courses are at the graduate programme level. Yet, despite the increasing numbers and the significant portion of graduate-level students participating in distance education, there is surprisingly little research and published literature concerning how to assess graduate student learning in fully online programmes.

Braun (2008) noted that much of the literature pertaining to online instruction calls upon samples from undergraduate students and primarily associates-granting institutions. Further exploration of graduate students' experiences in online learning may inform institutional practices, pedagogical decisions and future research.

This research should take into account the advanced nature of students and intended outcomes for graduate learning. Online graduate students have a history of

*Corresponding author. Email: pholzweiss@shsu.edu

success in higher education through the attainment of their undergraduate degree. They have also been exposed to a variety of teaching and learning practices throughout their tenure as a student. Both of these characteristics increase the expectations of graduate students to obtain a quality education. Even more important, but sometimes lost in the purpose of graduate education, is the “socialisation into the culture, values, and mores of a chosen profession” (Gansemer-Topf, Ewing Ross, & Johnson, 2006, p. 21). Faculty play a critical role in shaping how the next generation of professional leaders will learn their specialised field of study, develop their critical thinking and advanced problem-solving abilities, and contribute to the successful advancement of the profession.

Higher education currently operates from a scholarly model to apply effective distance education strategies from undergraduate studies *carte blanche* to graduate education (Braun, 2008). Research that takes into account the fundamental aims of graduate education and the unique nature of online learning for this population is needed. It therefore seems logical to seek the opinion of online graduate students about their successful learning experiences and share this information to advance the scholarship related to online graduate-level learning.

Literature review

In their review of 20 years of research on the impact of college on students, Pascarella and Terenzini (2005) concluded that students learn when they engage in their academic materials and make meaningful connections with their faculty and peers that help them apply the information. While the studies reviewed by the authors occurred in traditional face-to-face programmes, the same elements have been emphasised for success in online learning (Dixson, 2010; Ingram, 2005; Kenney, Dumont, & Kenney, 2005; Nitsch, 2003).

Researchers have identified several factors that promote student engagement in the online learning environment, though much of this theorisation is focused primarily on undergraduate-level learning. These elements include academic challenge and learning opportunities (Kenney et al., 2005); timely feedback on performance (Britto & Rush, 2013); and a supportive environment where a sense of community is developed (Kenney et al., 2005; Kuh, Kinzie, Schuh, & Whitt, 2005). Regular interaction with faculty was found to be another important element (Britto & Rush, 2013; Kenney et al., 2005). In fact, when students did not believe the faculty were fully engaged in the course, the perception of academic quality diminished (Armstrong, 2011). Finally, courteous interactions with peers (Rieck & Crouch, 2007) and students’ ability to organise their own course materials and assignments (Ingram, 2005) were found to have an impact on the level of engagement students had in online courses. Fewer positive interactions with peers and inability to organise resulted in decreased engagement in the learning process.

According to Robley, Farnsworth, Flynn, and Horne (2004), online students reported building several skills such as communication and critical thinking when the constructivist theory of instruction was used in their courses. Constructivist theory proposes that humans build knowledge and meaning through interactions with each other and their environment by bringing “unique knowledge, skills, attitudes, and beliefs to the learning experience” (Swan, 2005, p. 18). Individual constructivism occurs when a student creates knowledge from his or her direct experiences, while social constructivism involves creating knowledge through collaboration with

others (Almala, 2006). In the classroom, individual and social constructivism can take the form of activities such as problem-based learning, case study analysis, discussion forums, group projects, research papers and current event assignments (Almala, 2006; Dixson, 2010; Rovai, 2004). These activities help individuals make connections between what they know and what they learn in the classroom (Ingram, 2005).

Despite the use of similar instructional techniques, differences may be inherent between how graduate and undergraduate students learn. At a basic level, expectations for learning are different. Undergraduates learn foundational content in a general curriculum and within a broad academic field of study, while graduate students are focused on advanced content and skill development for a specific professional field (Seligman, 2012). These additional challenges demand an increased level of critical thinking that students may have to develop within the confines of a graduate programme. Gansemer-Topf et al. (2006) suggested that graduate students learn best when there is a combination of knowledge acquisition, personal investment of energy and time, and involvement with peers and faculty. They emphasised that for graduate students, peer relationships and a sense of belonging are especially important for academic success. When combined with knowledge of a specialised field, the multiple perspectives gained through these connections can propel graduate students to higher levels of learning and understanding.

In order to understand how graduate experiences may differ from undergraduate experiences in the online environment, it is necessary to examine student perspectives. Almala (2006) recommended that assessment of constructivist instructional techniques should occur by examining how students believe they progress during their academic instruction. Although Dixson (2010) utilised three existing survey instruments to assess student engagement in courses, research focusing on direct student perceptions of learning in online environments is difficult to find—especially perceptions of students in graduate studies. The current study sought to contribute graduate student voices to the discussion of how online students learn, and synthesise their perspectives on the best learning experience they identified within the nuances of constructivist theory.

Method

In order to examine student perspectives in an online graduate programme, the authors developed a brief instrument and research plan to collect information on the learning environment and social aspects of online graduate courses. This instrument was designed using the aforementioned literature, particularly Dixson's (2010) work, as a guide, and included several open-ended questions asking students for their opinions on the learning environment. The data being considered in this article are qualitative in nature and based on responses to one specific question. Qualitative data are integral to the constructivist theory, because it allows understanding of how experiences are interpreted and what meaning people have generated to those experiences (Merriam, 2009).

The population used for this study came from a doctoral granting public institution located in the southern United States. The institution has a total enrolment of more than 19,000 students, with approximately 3000 classified as graduate students. The institution offers 56 graduate degree programmes, with 21 being fully online. For this study, 86 students enrolled in a fully online Master of Arts programme in

higher education administration were invited to participate. Within this programme, students are engaged in course-based study with a required practicum. These students had an average age of 36 years of age, ranging from 19 to 61 years. Of them, 53% were White, 24% were African-American, 15% were Hispanic, 6% were Asian, 1% of participants were Native American and 1% were multi-racial. Female students accounted for the majority of the invited participants (69%), while male students accounted for 31%. In addition, the majority (93%) held full-time jobs in the field and were looking to advance into leadership.

Participants were invited via email to respond to an online survey and were given 5 weeks to respond. Two reminder emails were sent at two-week intervals until the conclusion of data collection, and participants were notified that their responses would be anonymously recorded to seek their most honest responses. As such, there was no means of confirming non-response bias for race, gender or age demographics. Of the 86 students surveyed, 60 (70%) completed the survey. This study focuses on results from an open-ended question related to the best learning experience students had during their online experience.

Analysis

Qualitative research seeks to identify the meaning of specific experiences using an inductive process of gathering and comparing data to create themes and categories (Merriam, 2009). In this study, participant responses were unitised into separate thoughts and sorted into meaningful groupings using the constant comparative method. Recurring patterns were then named as categories to help answer the research question.

To ensure validity and reliability, the authors used several techniques. First, the number of participants included in the study helped reach saturation (Merriam, 2009). That is, a wide range of individuals shared their perspectives, and the analysis demonstrated that the meaning each assigned to specific events formed strong relationships across all provided data. Second, triangulation was used by comparing existing literature to the named categories as they emerged (Richards, 2005). Similarities and differences between previous findings and the results of the current study were noted and examined. And third, an audit trail was maintained in order to capture decisions made about data, the construction of categories and reflections on the emerging themes communicated by the participants (Merriam, 2009).

Results

Participants were directed to “Think about the best learning experience you have had so far in the programme. What was the experience, and what did you learn from it?” Five major themes emerged from the analysis: (a) critical thinking assignments, (b) instructional technology, (c) faculty engagement, (d) interactions with peers and instructors and (e) personal responsibility. These themes compare with findings from research across a variety of learning media and instructional techniques (Dixson, 2010; Ingram, 2005; Swan, 2005). However, they also suggest unique and nuanced approaches faculty in online graduate programmes can take in making instructional, curricular and programmatic decisions.

Critical thinking assignments

According to Ingram (2005), online students are more engaged in their courses when they have assignments requiring active thinking and problem solving. The participants in the present study supported this idea with more than 90 comments, citing instructional methods using some form of information application as a benefit to their learning. Assignments they highlighted included service projects, interviews with an expert in the field and case studies. One participant explained the importance of applied learning by stating:

I do enjoy the classes better when the instructor relates the topic to real life situations. It seems easier to understand a topic when given a situation and having to apply a method that was discussed in class to the situation.

While critical thinking assignments are likely to appear in all classrooms, it may be more important for graduate-level classrooms to have a predominance of such activities to help them reach higher orders of thinking (Gansemer-Topf et al., 2006).

Conducting research and writing papers also emerged as an online instructional method that enhanced learning through critical thinking. Participants explained that by working through the research process and organising their thoughts, they were better able to understand how theory should be applied to a variety of professional situations. They also noted the value of learning how research papers are structured and why citing references correctly could help them build their professional knowledge. One participant commented:

I think the best learning experience I had was from my Tech in Higher Ed class, which was designed so that we did research and wrote brief papers and discussions over the topics covered each week. I have retained the information learned in that course far longer than usual.

Two participants specifically mentioned that being able to explore the research topic of their choice enhanced their learning, because it engaged them more in the subject matter.

While it may be assumed that writing is something all students obtain during their college-level education, Roksa and Arum (2011) noted that half of undergraduate students in their study had not been required to write more than 20 pages in any course. The National Survey of Student Engagement data (2013) supports this finding of minimal required writing at the undergraduate level. This translates into a majority of graduate students not having significant writing experience when starting their advanced degree programmes. Writing and research may need to comprise a larger portion of graduate programmes in order to fill in the previous learning gaps.

Similar to research papers, participants indicated that journal assignments helped them to reflect on what they had learned. As one participant explained:

I have to say that the best learning experience has been the journal entry. I have felt that I am able to give my knowledge of the topic and receive great feedback from the instructor. I feel that this has given me the opportunity to grow both personally and professionally.

It should be noted that all of the participants who mentioned journal assignments as being a good learning experience had completed one online course or were enrolled in their first online course at the time of this study. This may indicate that journal

assignments could be more effective with students new to the online environment. Journaling can help students explore their opinions and understand the material better before moving on to more interactive and collaborative assignments.

Instructional technology

Rovai (2004) suggested that online courses should contain a blend of peer interactions and individual assignments to help balance the independent and collaborative creation of knowledge. This concept was supported by study participants through 62 comments. The most cited technological tool, online discussion forums, promoted the exchange of ideas with classmates and instructors. As an example, one participant identified that by sharing thoughts in a weekly discussion of current events, “I learned what will [*sic*] really hinder or help us as higher education administrators.” All of the participants citing discussion forums as a primary learning tool had completed at least two online courses. This may indicate that students who have more experience with online courses or are further along in their educational programmes may benefit more from participating in discussion forums than students who are new to distance education or to the academic discipline.

Online discussion forums have been demonstrated to be more thoughtful and self-governing than discussions occurring in face-to-face environments (Swan, 2005). They can also be longer and more academically focused (Oztok, Zingaro, Brett, & Hewitt, 2013). Online discussions may have additional benefits for graduate students, because students have an opportunity to interact with peers who are becoming their professional colleagues. This goes beyond what is experienced in an undergraduate environment where a diverse set of fields may be represented in a specific course and discussions can take many forms. Graduate students who exchange career-focused information with their peers increase their acculturation into the professional field and increase their ability to acquire knowledge (Gansemer-Topf et al., 2006).

In addition to discussion forums, participants mentioned several other beneficial instructional technologies such as watching videos or podcasts created by instructors and peers, interacting with classmates through videoconferencing, and using online research tools from the campus library. Several participants suggested that they learned best when instructors utilised a variety of technological tools to help keep the course interesting. One participant commented:

I personally have enjoyed the professors who try to “mix” it up throughout the semester. They assign different types of projects (journal entries, quizzes, discussion boards, Tegrity recordings [podcasts], and papers). The professors who provide this variety of assignments have really enhanced my learning in the course. I find that I enjoy these classes more so (because it’s not the same routine every week) and I tend to excel with the variety of assignments offered.

While literature supports the diverse use of technology in instruction to help engage learners (Dixson, 2010; Ingram, 2005; Meyer, 2003; Morse, 2003), other researchers have found that technology is not used as frequently as it could be. Ke and Xie (2009) reported that most of the activities students reported for online courses comprised reading assignments, library research and offline interactions with peers. Harris and Martin (2012) added papers, multiple-choice exams, and discussion

forums to the list. Other forms of technology were infrequently used, which could be a factor for graduate students who are at an educational stage where they are expected to create knowledge rather than just absorb it passively.

Faculty engagement

There is no question that faculty are central to the construction of successful courses. In fact, faculty who teach distance education courses spend more time on course design, evaluation of student work and interactions with students than faculty working in traditional course environments (Andersen & Avery, 2008). Participants in this study emphasised the importance of the faculty through 36 comments covering topics such as feedback, support and encouragement, and expertise shared with students.

Researchers consistently indicate that successful online courses have engaged instructors who provide timely feedback on student performance (Swan, 2001; Zen, 2008). Participants in this study clarified that while they appreciated timely and regular feedback, they also wanted a thoughtful evaluation of how they could improve. In addition, when the feedback contained positive encouragement, it motivated participants to continue learning. As one participant noted, positive feedback “assured me of my knowledge in the subject studied” while another explained “positive encouragement to make decisions at work and with my education helped me to attain higher goals and balance in my life.” The responses indicate that the quality of feedback also mattered. Students needed assurance that they were interpreting material correctly and had a clear understanding of information being covered in a course.

Participants also recognised the expertise of instructors and the high-performance expectations they communicated to students as important contributors to learning. For instance, one participant shared that it was helpful to learn from an instructor’s professional experience, while another explained:

I am also appreciative of [my professor’s] tough-love approach. Because of her constantly (in a good way) reminding me that nothing should be overlooked in a paper (punctuation, spelling, spacing, and my nemesis: the Reference page). Because of her dedication to ensure I got it right, I am now a pro at citing references in correct APA format.

It should be noted that all participants citing instructor expertise and expectations as a beneficial learning experience had completed four or more online courses. It is possible that having more experience with online courses or being deeper into the academic discipline can help students discern how instructor characteristics impact the online learning process and may influence students’ perceptions of faculty commitment to learning.

While all online courses need faculty who are engaged, the participants in this study emphasised more depth to the level of engagement. Graduate students need more than faculty who answer email quickly and offer comments on assignments. They are emerging members of a community of practice, which emphasises the exchange of knowledge and a level of caring for each other that is not present in other groups (Ardichvili, Page, & Wentling, 2003). As demonstrated through their comments, the participants wanted faculty to reassure them, encourage them and guide them in the proper functions and knowledge of the profession. In essence, the graduate students were requesting mentoring, which demands more commitment on the part of the faculty.

Interactions with peers and instructors

Distance education students are more engaged in the learning process when they can interact with the instructor and their peers (Dixson, 2010). Interaction was also important to the participants in this study, who shared 34 comments on the topic. Specifically, there seemed to be a preference for assignments involving group collaboration. While some participants acknowledged that working with others in an online programme can be challenging, they also recognised that peer interactions enhanced their understanding of the material. As one participant explained, “The best experience I have had is being able to improve communication with fellow students. Group collaboration aided with understanding different aspects of higher education through experience.”

A related idea revealed that participants felt their best learning experiences involved interacting with their instructors throughout the course, regardless of the purpose of the interaction. Participants cited regular emails, occasional phone calls, and synchronous class meetings as contributors to the learning process. One participant summarised the importance of having an interactive online environment by stating:

Although the textbooks have been good, the best experiences have come from ... being able to interact with other students and the instructors and learn from their experiences. Classes requiring only reading and no interaction with the instructor or other students are not even remotely as helpful.

Similar to the depth of meaning communicated in the faculty engagement theme, participants were focused on the exchange of information rather than just the interaction itself. While undergraduate students may place meaning on the social aspects of a classroom (Pascarella & Terenzini, 2005), these graduate students wanted to engage with others to further their understanding of information and learn from others’ experiences. When community members share and create knowledge, it becomes a community of practice and moves beyond the surface-level interactions that may exist in other groups (Zhang & Watts, 2008).

Personal responsibility

One interesting and unexpected theme emerging from the data was personal responsibility, which encompassed 18 comments. Some participants explained that their best learning experience occurred when they understood what was needed to improve their own performance. This included how to communicate professionally as well as adjust time management and organisational techniques to better accomplish classroom assignments. As one participant shared:

The best learning experience I have had so far is when I accidentally [*sic*] submitted the incorrect assignment, that assignment made the difference between my “A” and my “B.” I learned to date my assignments and label them draft and final. It also taught me that review is always important and I can apply that to my daily job duties.

Another participant learned the importance of written communication and explained it is “always important to watch what you say and how you say it in an email. There’s little room for real clarification online. It’s just written in stone, as is.”

Conclusions and recommendations

A scant amount of research exists on how students learn material in an online environment, and even less on how graduate students learn in online environments. The majority of research for online learning is linked to student engagement (Dixson, 2010; Ingram, 2005; Zhu, 2012). The assumption seems to be that students learn the same way whether they are in an online course or a face-to-face classroom. Yet, the vast differences between the two learning environments indicate that there may be additional factors which need exploration.

For instance, since face-to-face courses have the automatic connection of physical presence, instructors can interpret students' non-verbal communication and real-time interactions to find out what they are learning and how they are engaging with the material. Online faculty do not have those signals so they must depend on direct communication from students, which is not always forthcoming. The faculty responsibilities are made more difficult because of the need to create an environment that keeps the students interested and challenged.

Graduate-level education further complicates the online faculty role. Educational theorists (Gunzenhauser & Gerstl-Pepin, 2006) have argued that graduate-level education requires an understanding of and appreciation for the flexible nature of knowledge. This outcome is often advanced through dialogue and application of discipline-specific content to problems, which can be accomplished with a variety of purposeful instructional techniques such as online discussions and case studies. However, the findings of this study suggest an additional level of instruction is necessary to accomplish the learning needs of graduate students.

As constructivist theory emphasises, it is only when we explore the nuanced meaning of what participants shared that we can move beyond the "learning as engagement" concept and delve deeper into how graduate students may learn in the online environment. An overarching theme of the participant responses was the idea of having the academic programme and corresponding courses serve as a community of practice. Wenger and Snyder (2000) define a community of practice as being part of a group where knowledge is the focus. As you join the group, you begin at the periphery then gradually become integrated as you learn more. Being a member of a community of practice means that you participate in analysis and reflection with other members for the purpose of creating knowledge.

Participants in this study repeatedly referred to their best learning experiences as activities that allowed for the creation and/or sharing of knowledge. For instance, their best learning experiences included critical thinking and problem-solving assignments, research, writing, journal reflections, discussion forums, videos created by the instructor or peers, videoconferencing and group projects. In addition, they desired more of a mentoring relationship with faculty where they could seek guidance for and information about their professional development. In this role, the faculty serve as experts supporting and encouraging novice members of the community on what it means to become knowledgeable about the subject. Even the smaller theme of personal responsibility emphasised the need for participants to improve their own performance in the classroom and present themselves more as professionals.

Developing a community of practice for online graduate students may prove more valuable for learning than just focusing on the specific instructional techniques shared in recent literature. When such a community is formed, the class becomes its own example of the constructivist theory of instruction (Almala, 2006). When

combined with specific assignments such as problem-based learning, group discussions and collaborative activities, the entire course becomes an opportunity for students to become active participants in the creation of knowledge (Cowan & Menchaca, 2014; Swan, 2005). Graduate students in particular have diverse experiences with undergraduate education, and also have differing perspectives based on their unique work environments and amount of time spent as mature professionals. Developing programmes and classrooms to build such a community would help capture shared experiences and varying interpretations of learning materials to enhance knowledge acquisition.

Yet, creating this kind of environment places a burden on faculty to provide the necessary structure. Instruction must become more purposeful and create a situation where cognitive apprenticeship is possible. In cognitive apprenticeship, students need to move beyond observing phenomena to being able to explain and discuss it (Brandt, Farmer, & Buckmaster, 1993; Collins, Brown, & Holum, 1991). Faculty guide and mentor students through the process by carefully designing and offering feedback on activities that encourage interaction, dialogue and critical thinking. The process concludes with reflection on what has been learned, an activity faculty may overlook as being integral to knowledge creation.

Based on the tenets of cognitive apprenticeship and the creation of a community of practice as an essential philosophy of graduate education, there are several implications for practice and additional research that can be extrapolated from the current study. First, there is a need for effective instructional design for online graduate courses. Course and programme design should not focus on what the technology allows, but rather on the learning goals and objectives required for graduate-level study and professional development in the specific field. Instructors should be deliberate in the techniques selected to deliver and assess student learning, particularly in light of the potential for deepened learning through constructivism. Assignments and activities that require application of the material will help establish the students' active participation in the learning process. Continuing to research a variety of design models that are most effective for engaging graduate-level online learners is essential to understanding knowledge creation in the distance education environment.

Second, establishing community is critical to the success of online student learning for purposes of both engagement and construction of knowledge. The course design must integrate strategies to help students connect with the course, the programme, the instructor and fellow students. As suggested by this study, graduate students may assign additional professional meaning to these interactions. Continued research related to how graduate students view and build community is important for the advancement of best practices in online graduate education.

Third, graduate students should be required to regularly reflect on their learning during their educational courses. Attention should be paid, however, to the types of reflection assigned over the entire curriculum. Differentiating instructional methods and assignment types may support the various levels of learning that naturally occur in an advanced degree programme. This study suggests that students new to the discipline or to the online learning environment may benefit more from individual exchanges with the instructor through activities such as journaling, while more advanced students may learn more from interactions with their peers such as through discussions. Additional research is necessary to confirm whether or not these instructional methods are more valuable to certain subgroups of graduate students over others.

Fourth, professional development should be incorporated into the graduate classroom environment as these students have a need and desire to become proficient in their chosen career field. As participants in this study indicated, receiving feedback on how to improve professional-level research and writing enhanced understanding of personal skill levels and motivated them to continue learning. More research is needed to understand how professionally focused guidance can improve engagement in the learning process for graduate students.

And finally, there is a need to guide online graduate students with their own learning and engagement. While timely and regular feedback has been consistently demonstrated as a best practice in distance education (Almala, 2006; Britto & Rush, 2013; Dixon, 2010; Swan, 2005), the current study emphasises the importance of adding encouragement and positive reinforcement from a professional perspective to help motivate these advanced students. Results also indicate that it is necessary to provide graduate students with guidance regarding personal practices that can lead to successful academic and professional progress such as how to organise assignments, review written communication before sending, and become an independently directed learner. These tips can be incorporated into the classroom environment as well as an orientation session when students join the online programme. Additional research on personal characteristics that lead to academic success in distance programmes and how to assist graduate students in building these characteristics is necessary.

This study has demonstrated the need to expand the conversation about how graduate students learn in an online environment. Research conducted with undergraduate students may not fully capture the nuanced meaning of learning and knowledge acquisition inherent in graduate education. While the tools and approaches may look the same on the surface, the subtle differences in the needs of graduate student learning are important to identify and address. Further investigation of the learning needs of online graduate students, especially in relation to the creation of meaning as outlined by constructivist theory, is critical to the overall success of the distance education environment.

Notes on contributors

Peggy C. Holzweiss is an assistant professor at Sam Houston State University in Huntsville, Texas. She holds a doctorate in Higher Education Administration from Texas A&M University and worked in college administration for 18 years prior to joining the faculty. Her research interests centre on student learning and development.

Sheila A. Joyner is an assistant professor of Educational Leadership at Sam Houston State University. A former community college faculty member, academic dean and provost, her research interests include online teaching and learning, faculty diversity and academic programme evaluation.

Matthew B. Fuller is an assistant professor and coordinator of Higher Education Administration at Sam Houston State University. In this role, he teaches online classes in higher education research, law and student services, and advises masters and doctoral students. His research interests include higher education history, assessment and legal issues.

Susan Henderson is a doctoral candidate in Counselor Education at Sam Houston State University. She has conducted research in both the Educational Leadership and Counselor Education departments. She has presented at local, state and national conferences, and she has published research in *Assessment and Evaluation in Higher Education*.

Robert Young currently teaches at Lone Star Community College after receiving his doctorate at Sam Houston State University in 2013. He had previously received his MS and BS in Environmental Science and Biology from the University of Houston Clear Lake. His research interests lie in the area of college preparedness.

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