Student Engagement in an Online Special Education-General Education Graduate Program

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Abstract

Engagement is a key factor for student learning, participation, and retention in a distance education course and programs. The Online Student Engagement Scale (OSE) was developed as a tool to measure student engagement in online courses. This study investigated student engagement in a graduate-level online special education-general education program to get students' perceptions about their (a) level of engagement and (b) factors contributing to their engagement. Following the OSE survey, students participated in a focus group to gain greater understanding of students' engagement in their online course and program. Results indicated that student engagement in the online program was highly rated and several themes emerged as reasons students believed that the newly minted online program was engaging. Based on these findings, implications for strengthening practice regarding engagement in online courses and programs are discussed.

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There has been a rapid growth of online programs, with many higher educational institutions offering online courses and graduate programs to better serve the students. Enrollment in online courses has increased over the years (Allen & Seaman, 2013), with about 22% of graduate students exclusively enrolled in online programs in 2012, that increased to 27.1 % in 2013 (National Center for Education Statistics, 2016). Although there are numerous advantages of online learning, there is also increased concern about student retention, engagement and interaction in online courses (Levy, 2004; Gayton & McEven, 2007; Park & Choi, 2009; Street, 2010; Xie, 2013). There is evidence in literature that the dropout rates in online courses are greater compared to traditional face-to-face courses (Chyung, Winiochi & Fenner, 1998; Xenos, 2004; Heyman, 2010; Street, 2010). Student engagement is a key factor in ensuring students' successful completion of their degree, at the same time making online learning productive for the institution (Ivankova, 2014; Stott, 2016).

There have been multiple attempts to better understand engagement from a variety of perspectives resulting in many theoretical models of student persistence. Most show that retention increases with growing levels of academic and social engagement (King, 2014). Axelson and Flick (2011) have defined student engagement as a description of how involved or interested students appear to be in their learning and how connected they are to their classes, to each other and to their institution. Dixson (2010, 2015) agrees and has described engagement as being composed of individual attitudes, thoughts, and behaviors and communication with others. Thus, student engagement involves both affective and behavioral components like skills engagement, participation/interaction, emotional and performance engagement (Handelsman et

al., 2005). The framework for this study is based on the dimensions of student engagement by Handelman et al., (2005) and the best practices that students find engaging in online courses. Dixson (2010, 2015) based the Online Engagement Scale (OSE) on the student engagement dimensions by Handelsman et al., (2005). The authors intended to measure student engagement in a newly minted online Master of Special Education-General Education (M.EdSE) in add to research on online course choices. By using the OSE (and other data collection procedures described later) this study aims to both replicate the use of the OSE scale by Dixson (2015) and gather insightful information about student engagement in the online program that will be useful to the program and informative to other teacher preparation programs, particularly special education preparation programs.

Literature Review

Student engagement is a major factor in predicting dropouts in online courses. In an online survey comparing undergraduate and graduate students who dropped out from an online course to those who completed the course, it was found that dropout students reported to have significantly lower satisfaction with online learning courses (Levy, 2004). As per the USA National Survey of Student Engagement (NSSE, 2002), engagement is seen to comprise of active and collaborative learning, participation in challenging academic activities, communication with instructor and peers, and feeling legitimized and supported by university learning communities (Coates, 2007). Recent studies on student satisfaction and engagement focus on several best practices including – student interaction, active learning environment, instructor presence and feedback, the course design, and technology (Astin, 1993; Ewell & Jones, 1996; Tinto, 1993; Lundberg & Sheridan, 2015; Pascarella & Terenzini, 2005; Kuh et al., 2007; Salazar, 2010; Chakraborty & Muyia Nafukho, 2014; Young & Bruce, 2011; King, 2014; Levy, 2004; Sun, Tsai, Finger, Chen & Yeh, 2008; & Wong, 2013). The following paragraphs provide a summary of the existing literature for each of the factors.

Student Interaction

Student interaction with faculty and peers are critical to learning, with a strong association between formal and informal contact enhancing learning outcomes (Astin, 1993; Ewell & Jones, 1996; Tinto, 1993; NSSE, 2000, 2002; Lundberg & Sheridan, 2015). Learning outcomes are enhanced when students become active and purposeful participants in their learning (Astin, 1993). The results from Dixson's (2010) study on online engagement indicated that student-student and instructor-student communication were correlated with higher student engagement and student's access to multiple communication channels and interaction among students and between the student and instructor led to increased levels of engagement. Students also develop into autonomous learners through the practice of engagement and interaction with faculty and peers, leading to critical thinking and personal development (Pascarella & Terenzini, 2005). Rabe-Hemp, Woollen and Humiston (2009) in a study comparing autonomous learning in an online setting and traditional classroom setting, found that students in online courses were more reflective in their learning practices, and more involved in their class discussions with higher levels of student-instructor interaction.

Active Learning Environment

Kuh et al., (1997) recommended opportunities for active learning, with collaboration and interaction with other learners increase engagement (Astani, Ready & Duplaga, 2010; NSSE, 2000, 2002). Students develop into autonomous learners through the process of student-centered teaching, involving interaction, reflection, analysis and discussion, leading to better academic performance (Pascarella &Terenzini, 2005). Similarly research demonstrates that student participation in a learning community is positively linked to perceived engagement (Young & Bruce, 2011). Student's engagement in educationally purposeful activities are positively related to both grades and persistence, and increased graduation rates are correlated to engaging pedagogies like active and collaborative learning (Kuh et al., 2007). Dixson (2010, 2015) found that students did not report any particular activity as increasing engagement but a variety of activities as effective. Multiple activities like discussion forum, labs and group projects, and research papers were engaging as part of active learning (Dixson, 2010). Researchers recommend that collaborative activities need to be embedded in online learning to avoid a lack of student engagement and isolation in online learning (Chakraborty & Muyia Nafukho, 2014; Salazar, 2010).

Instructor Feedback and Presence

In their quantitative study of 1,410 undergraduate and graduate students across five colleges to examine the correlates of online classroom community and student engagement, Young and Bruce (2011) found that the instructor presence was important to create a sense of community and that the instruction needs to be designed to actively involve learners in meaningful tasks to elevate student engagement. In this case, classroom community was defined as the connections among students and between students and instructor that lead to increased learning (Young et al., 2011). Feedback given by the instructor as part of the coursework is useful and has a positive impact on the student's success in online courses (Chakraborty & Muyia Nafukho, 2014; Kupczynski, Ice, Wiesenmayer & McCluskey, 2010) that relates to extrinsic motivation (Handelsman et al., 2005). Chakraborty et al., (2014) based their findings on a review of literature through a systematic and thorough search of empirical studies focusing on online engagement strategies. Feedback that relate to clarification and understanding the key points from the course materials, and assignments are important as there is a common concern in the literature that interaction between the student and the instructor maybe limited in an online learning environment (Gillingham & Molinari, 2012; King, 2014). Timely feedback was crucial to success and engagement (Young & Norgard, 2006). Dixson (2010) had reported that students who received feedback on assignments scored higher on engagement levels. Student-instructor interaction also led to increased learner satisfaction (Abdous & Yoshimura, 2010) thus emphasizing the importance of the role of the instructor in facilitating channels of communication and feedback to improve satisfaction (Gillingham & Molinari, 2012; King, 2014; Robinson & Hullinger, 2008; Simon, Jackson & Maxwell, 2013; Young & Bruce, 2011; Young & Norgard, 2006).

Course Design

Design of the online course was also a significant factor for student satisfaction and engagement with online courses (Ivankova, 2014; Levy, 2004), with students wanting a common structure for the courses (Young & Norgard, 2006). In a quantitative study exploring student perceived satisfaction in relation to course content, instructor feedback and attitude towards e-learning,

course flexibility and technology quality, and diversity in assessments, it was found using regression analysis that course quality had the strongest association with satisfaction, which included factors like course design, ease of use of course website and navigation, teaching materials, diversified assessments, and interactive discussion (Sun, Tsai, Finger, Chen & Yeh, 2008).

Technology

Student's knowledge and perception of technology was also found to shape student satisfaction and engagement with higher levels of experience with online learning leading to more favorable perceptions about online courses (Astani et al., 2010). The resources used for online learning in these courses also had an impact on the student engagement (Wong, 2013). Sun and Rueda (2012) found that online activities and tools like multimedia may increase the emotional engagement in online learning.

From the student's perspective, online courses offer several benefits, like increased flexibility, and more work-life balance; however, creating meaningful interaction is of paramount importance to engage an online student (Sun & Rueda 2012). The online instructor must develop the course with a structured online platform, establish and maintain an online presence, provide timely feedback, facilitate interaction among the students and themselves, distribute information in an efficient manner and incorporate various multimedia and active learning in learning resource tools, and facilitate multiple channels of communications (Kupczynski et al., 2010; Salazar, 2012). Thus, since student engagement is a key element that connects students with their course and learning, it is necessary to measure student engagement.

Measuring Engagement

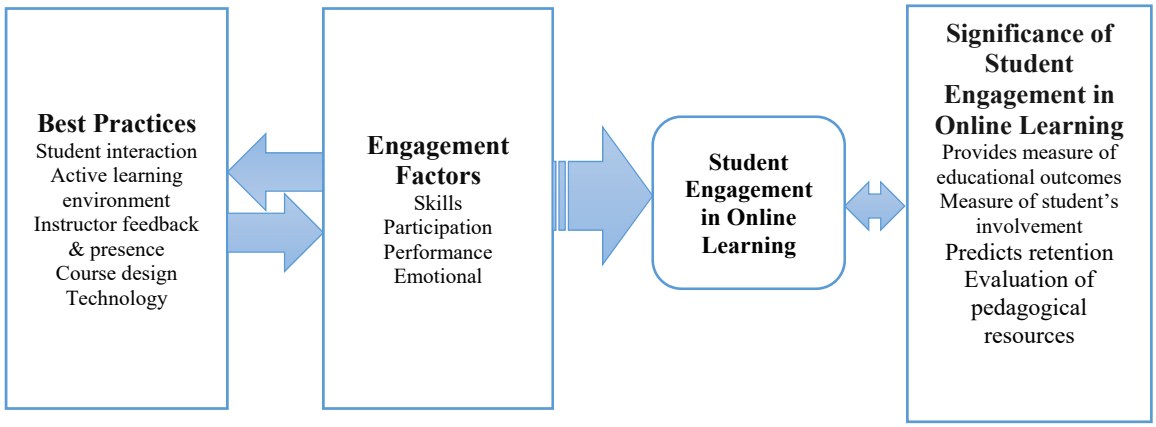
Numerous measures of student engagement have been developed and used in research. Handelsman et al., (2005) developed the Student Course Engagement Questionnaire (SCEQ) that contends that student engagement consists of four factors: skills engagement (what students "do" like staying up on reading, putting forth effort); emotional engagement (how connected they feel to the course/content, how applicable they feel it is like making the course interesting, applying it to my life); participation/interaction engagement (interacting with others, enjoying the course like having fun, participating in small group discussions), and performance engagement (student's desire or goal to succeed in the course like doing well on tests, getting a good grade).

Dixson (2010, 2015) modified the SCEQ to create the Online Engagement Scale, an instrument to measure student engagement in online courses. The Online Engagement Scale (OSE) was created using a four step process that included reviewing the existing measures of student engagement, conducting a focus group discussion of online instructors, a pilot study to test the initial instrument and finally a test for the instrument. Dixson (2010), in their pilot test of the 30 items conducted with 31 online students, found that the reliability was strong (Cronbach's alpha = 0.95) with the scale correlating with two global items on engagement with the course ($r = 0.73$; $p < 0.01$), one global item of social presence (getting to know other students), and one global item of teacher presence (getting to know instructor) ($r = 0.38$; $p < 0.05$).The engagement scale was then tested with a larger sample of 186 students across 38 courses from six campuses of a large Midwestern university. Factor analysis to validate the scale measurement yielded four

factors of 19 items loading 0.60 or higher: skills, emotional, participation, and performance (Dixson, 2010). The 19 items indicated a strong reliability with a Cronbach alpha of 0.91 and a significant correlation with the global course engagement item ($r = 0.67$; $p < 0.001$). Just as in the pilot test, these 19 items were significantly correlated with both instructor presence and student presence (Dixson, 2010). Hence only these 19 items were used for the OSE scale. To externally validate engagement, Dixson (2015) conducted a study to correlate the OSE with actual online student behaviors as tracked by the course management software, wherein the tracked behaviors included reading posts, reading/viewing content (reading posted documents or emails, viewing links or videos, writing posts or emails, and taking quizzes. Dixson (2015) divided online behavior into observation (taking in content) learning behaviors and application (producing/demonstrating learning) learning behaviors. The study found that the application learning behavior was significantly correlated with the OSE scale, thus supporting the validity of the scale in measuring the engagement of the students.

Figure 1 (shown below) illustrates the relationship between the best practices and the four factors of student engagement (Handelsman et al., 2005) forming the structure of the OSE (Dixson 2010, 2015).

Figure 1. Student Engagement in Online Learning



Thus, since the number of students taking online courses is increasing, understanding factors which contribute to student engagement is important (Stott, 2016) and getting information about student engagement will measure the student's involvement in key educational processes (Kuh et al., 1997) and help in focusing consideration of the quality of education (Astin, 1985). To understand the features of online learning pedagogy that may affect student engagement, this study explores the perspectives of graduate students in a newly started M.EdSE online course in a mid-Atlantic public university on increasing their engagement in the four factors of student engagement namely, skills, emotional, participation/interaction and performance engagement (Handelsman et al., 2005). Specifically, given the four factors of student engagement and importance of student engagement in online programs and the concern about student retention and interaction in online courses (Levy, 2004; Gayton & McEven, 2007; Park & Choi, 2009;

Street, 2010; Xie, 2013) the purpose of this study was to utilize the OSE to answer the following research questions:

1. To what extent are candidates enrolled in the online M.EdSE program engaged in their courses/program?
2. What factors/activities contribute to students' engagement in the online courses/program?
3. To what extent do candidates enrolled in the online M.EdSE program perceive engagement as a factor for success and retention in the program?

Method

This research study explores the perspectives of graduate students in a new master of education in special education (M.EdSE) online program in a mid-Atlantic public university. The online M.EdSE program is designed to prepare graduates with the professional knowledge and skills needed to work in a variety of settings with students identified with high incidence-disabilities (e.g., learning disability, EBD, OHI). The program can lead to an endorsement in the special education curriculum and is designed for students that work or plan to work in general education classrooms wherein children with special needs are being collaboratively taught either in self-contained, residential, or various community environments. The program is a total of 40 credit hours (14 courses) and can be taken entirely online. Through the online coursework, students will engage in curriculum that will incorporate a broad concept of education, research, development, related disciplines and special education to build on professional knowledge and understanding. The program offers field experiences that can take place in the students' classroom. There are placement opportunities outside of the candidates' classroom or schools as well. Students are required to complete a full-time internship (student teaching) during the final semester of the program. This internship/externship requires that students demonstrate competency in the program's curriculum through classroom practice and regular supervision (in-person or online) by faculty. Students can complete the program full-time in about two years and part-time in less than four years.

Universal Design for Learning

Universal Design for Learning (UDL) became an integral component of developing the coursework for online M.EdSe program. UDL is an important set of guidelines that allow for all students to access learning, based on their needs and interests (CAST, 2008). The main goal of UDL is to help educators address the learning differences for all students, from those with learning disabilities to those with significant academic proficiencies (Mangiatordi & Serenelli, 2013). UDL guidelines and principles provide a necessary framework to address learner variability, and provide instructor/student interaction, student engagement, and ongoing student feedback all designed to provide effective instruction (Watwood, Nugent, & Diehl, 2009). The researchers developed the following table that not only lists each of the principles and guidelines of UDL, but provides examples of how each is featured in our online courses. The UDL framework emphasis on engagement was of interest in developing the online M.EdSe program.

Seminars

Other integral components of our program were the monthly seminars conducted by faculty. Seminars were held in-person and streamed online, but were optional for students enrolled in the

online master's program. The seminars focused on expanding learning opportunities by engaging students in professional development activities that were covered in the online courses. The seminars provided in-depth practice and support on how to build relationships with students with disabilities and their families; equitable teaching practices; navigating the pressures and expectations of the first few years of teaching; analyzing the Individuals with Disabilities Education Act (IDEA) and other legislative and policy language so that teachers can learn the nuances of that language and engage in effective practice.

Survey Implementation and Procedures

As described earlier, the Online Student Engagement scale (OSE) (Dixson, 2015) was used by the authors to assess graduate students' perception of engagement in the online program. Dixson (2010) based the OSE on the Student Course Engagement Questionnaire (SCEQ) (Handelsman, Briggs, Sullivan & Towler, 2005) and modified it for online courses. This measure was used since its creators contend that student course engagement consisted of four factors: skills engagement (including staying current with reading and putting forth effort), emotional engagement (including making the course interesting, and applying it to the learner's life), participation/interaction engagement (having fun, participating actively in group discussion), and performance engagement (doing well on tests, getting good grades) (Dixson, 2010; Handelsman et al., 2005). The scale ranged from 1 to 5 where lower scores would indicate lower engaging behaviors related to the survey item and higher rating would indicate greater characteristic of the engaging behavior. As mentioned in the previous section, the Dixson (2010, 2015) studies showed that the OSE exhibited face and expert jury, along with concurrent and external validity. The OSE also exhibited reliability and thus could serve as a reliable indicator of student engagement in the online environment.

The authors also conducted a semi-structured focus group to reveal additional information about the factors that contributed to students' engagement in the online M.EdSE program. The focus group interviews lasted approximately 45 minutes and took place at the university. There were three open-ended questions asked to the focus group: (a) what factors contributed to your active participation in your online program? (b) What recommendations do you have for improving active involvement your online program?, and; (c) Would you recommend this online program to others? Why or Why not?

The survey was distributed to all participants enrolled in the online M.EdSE program through the university email and survey system during the second week in April, 2016, using Google Forms. The authors requested that the participants complete the survey. The authors also sent a follow-up/reminder email after approximately two weeks, and again after four weeks. This method resulted in 33 responses out of the total 42 participants in the program, of which 31 (73.8%) were fully completed and used for this study. The author also contacted participants via email to recruit participants to form a focus group to gather additional data regarding students' perceptions of engagement and the factors for success in the online program. Five participants agreed to join the focus group which was held approximately one week after the survey was closed to participants.

Data analysis

A mixed data collection approach was used to gather and analyze the quantitative and qualitative data. The quantitative data were analyzed using descriptive statistics (i.e., mean and standard deviation) for each item on the OSE scale. The focus group consisted of five students enrolled in the program. The focus group was based on three open-ended questions probing participants' perception about their level of engagement given the online and program course designs and activities. The qualitative data were analyzed using the 'framework analysis" process described by Ritchie and Spencer (1994) which comprises five stages of data collection and analysis of focus-groups: familiarization; identification of the thematic framework; indexing, charting, mapping an interpretation. The quantitative and qualitative feedback generated useful information.

Results

Demographics

At the time of this study there were a total of 42 students enrolled across the online M.EdSE program. Graduate students that enrolled in the program when it began in summer 2014 were asked to complete the survey. All students were in-state. In all, most of the participants were identified as female (n = 26; 83.9%) and male participants were (n = 5; 16.1%). Most of the participants were in the 20-29 age group (n =14; 45.2%) and were identified as white (n = 21; 67.7%). Participants were asked about their current employment status and whether they have ever enrolled in an online course before this program. Overwhelmingly, participants stated that they worked full-time (n = 25; 80.6%) and a clear majority had taken an online course before being enrolled in this program (n = 29; 93.5%). Approximately, seventy-one percent of participants had a grade-point-average that was 3.6 or above and a majority (n = 17; 54.8%) on average enrolled in at least 2 online courses per semester.

Quantitative and Qualitative Analysis

The means and standard deviations were calculated for each survey item. Mean scores ranged from 3.19 to 4.39. Overall participants mean scores were moderately high for the skills engagement factor category (M = 3.62 overall). The results for the emotional engagement factor also indicated a moderately high level of engagement by participants (M = 3.88). The range of mean scores for participation/interaction engagement were greater than other factors, but there was no significant difference on the average score for the category (M=3.61). Finally, the results for the performance engagement factor (M=4.18) were slightly higher than other categories, though still within the moderately higher range; which is consistent with other factors for the survey. Results are displayed in Table 2.

Table 2
Online Engagement Perceptions of Participants (*N=31*)

Engagement Skills	Mean	Standard Deviation
Skills engagement factor		
Making sure to study on a regular basis	3.39	.989
Staying up on the readings	3.23	.920
Looking over class notes between getting		

online to make sure I understand the materials	3.52	1.12
Being organized	3.84	1.00
Taking good notes over readings, PowerPoints, or video lecture	3.84	1.13
Listening/reading carefully	3.94	1.09
Emotional engagement factor		
Putting for effort	4.03	.983
Finding ways to make the course material relevant to my life	3.97	1.08
Applying course material to my life	4.06	.963
Finding ways to make the course interesting to me	3.57	1.10
Really desiring to learn the material	3.77	1.04
Participation/Interaction engagement factor		
Having fun in online chats, discussions or via email with the instructor or other students	3.23	1.15
Participating actively in small-group discussion forums	3.68	1.05
Helping fellow students	3.97	.983
Engaging in conversations online	3.65	.854
Posting in the discussion forum regularly	3.94	.854
Getting to know other students in the class	3.19	1.14
Performance engagement		
Getting a good grade	4.39	.919
Doing well on the tests/quizzes	3.97	.983

In open-ended questions, the focus group was asked to describe factors/activities that contributed to their active engagement in their online courses and the online program. Many of the areas that were identified as factors that contributed to active engagement were like skill engagement strategies that were rated high on the survey by participants (e.g., being organized; notes and video lectures; applying course material to my life). To be more specific, the common themes that emerged from the responses were: (a) the interactive capabilities of the course and how it was designed, allowing them to have easy access to course information, tools, and resources, (b) how applicable the material was to their current careers, and (c) the interaction that took place in the discussion boards. (See Table 3 for examples of participants' replies that helped to form each theme).

Table 3. Open-ended question response and themes

Skill engagement topics	Participants' quotes
Factors/activities that contributed to their active engagement	"clicking through the course settings and easy use of the technology resources made me more active in the course" "the instructional modules were easy to use." "the assessment and reading classes provided me with content that I needed right away to help my students" "UDL class with using the technology resources, I was able to use those technology resources right away in my classroom" "and I liked when the professors had a question and answer session, that was really helpful"
Improve active involvement in online courses and program	"I liked having the seminars because of the in-person contact." "group assignments were not as meaningful until I was able to meet the people in the group"
Recommend the online M.EdSe Program: why or why not	"the schedule of the online program allowed me to make my own routine and I like the freedom; and distance was not an issue" because I work, "4-6:40 classes do not fit in to my work and family schedule; the online course and program is what I needed" "structure of the courses and program allowed her to be engaged and created a positive and meaningful experience" "I have taken online courses before and this structure just works for me." "the fact that we do not have traditional assessments, instead we have many project-based activities and are assessed in multiple ways was necessary for me to show my knowledge"

Focus group respondents were also asked what recommendations they must improve active involvement in their online courses and program. Participants indicated that having more in-person contact to increase collaboration to help improve engagement. This is consistent with survey results that indicated lower engagement levels under the participation and interaction engagement factor. Many of the participants discussed how the program seminars were meaningful and contributed to their active participation in courses and within the program. (See Table 3 above for example replies).

As a final inquiry, participants were asked would they recommend the online M.EdSE program to other and why or why not. Overwhelmingly, participants agreed that they would recommend this program to other students. The major themes emerging from this question centered on (a) flexible programming, (b) easy course design and (c) rigor. As with the survey responses may be linked to emotional engagement and participation/interaction engagement factors that received higher ratings. (See Table 3 above for examples of participants' replies that helped to form each theme for this question).

Discussion

As indicated earlier, the importance of engagement in supporting the retention and active learning of students—mostly those in an online program—has been recognized in the literature (Gayton & McEven, 2007; Park & Choi, 2009; Street, 2010). It is generally understood that a reduced focus on engagement may adversely affect a student's involvement, learning, and retention in an online course (Ivankova, 2014; Stott, 2016). Namely, both the social and academic success of a student in an online program may very well be dependent on the level of engagement—how connected the student is, how she interacts with peers and instructor, and how she interacts in the course, and with learning activities. Engagement signifies one of the most critical parts of an online course, and is essential across disciplines, and both for face-to-face and online learning environments (Azvedo, 2015).

Though the correlation between engagement and retention and learning is well recognized, there is limited research on what students perceive as engaging for academic and social success and retention in an online course (Dixson, 2015). This study was an attempt to build off Dixson's (2015) online student engagement measure to assess graduate student's perceptions of engagement in a newly minted online M.EdSE program, and to acquire knowledge and understanding about the activities that create a sense of engagement for students to support academic and social success, and retention in the program. This study measured graduate-level special education students enrolled after their first year in the online program. The students were asked to rate whether each behavior, thought, or feeling (four factors of engagement) in the survey was characteristics of her, and to describe the activities and other factors that contributed to engagement in course and in programming. In the Dixson study, the OSE was validated and student behaviors were tracked using an online course management system; however, the experiences of these students and whether engaging activities and other related factors play a role in student retention in these online courses or a program was not considered. However, consideration of the relationship between engagements of students in online courses/programs is critical to ensure success in learning and retention.

Overall, the results provide empirical support in the interpretation of student engagement in terms of the online engagement scale measuring the four factors - skills engagement, emotional engagement, participation/interaction engagement and performance engagement (Dixson, 2015; Handelsman et al., 2005). Specifically, the investigators found that students indicated are emotionally engaged as is reflected by the highest rated engagement items on the OSE scale of "applying course material to my life," and "putting forth effort, and finding ways to make the course material relevant to my life." The themes that emerged from the first open ended question in the focus group interview is directly related to emotional engagement as the participants could

generate discussion that centered on how applicable the course material was to their current roles. The participants stated that having an instructor who was knowledgeable about the content, could understand where they were in their careers, and make this information applicable was motivating and allowed them to use the material in their current settings. The results found here are like those found by Rabe-Hemp et al., (2009), Pascarella & Terenzini (2005), Kuh et al., (1997) and Handelsman et al., (2005). This finding may suggest that educationally purposeful activities (e.g., reflective research projects, discussion board with peer-to-peer interaction, labs) may create a strong agreement in emotional and active engagement and learning in online courses.

Additionally, the participation/interaction engagement factor generated interesting findings. As stated earlier, student engagement can depend on the course design and instruction, assessments, technology, and the creation of an active online environment (Sue et al., 2008; Young & Bruce, 2011). In the present study, students identified "helping fellow students," "posting in the discussion forum regularly," and "engaging in conversations online," as higher rated factors for participation/interaction. This finding resonates with the focus group that discussed how they valued online discussion interaction. Participants in the focus group perceived the discussion boards as interactive sessions facilitated by the instructors, and were valuable in building relations, and critical thinking. In comparison, the other items on the OSE that correlated to participation such as "having fun in online chats, discussion or via email with the instructor or other students" and "getting to know other students in the class" were rated lower. This finding might be explained by the feedback from the focus group where the students wanted more in-person contact along with online interaction with fellow students to increase collaboration and meaningful relations, and emphasized the significant role that the monthly seminars had on their engagement levels. Furthermore, this finding may suggest that although there are activities identified by the students as interactive (e.g., online discussion boards), students may need additional opportunities, perhaps hybrid-like opportunities, to interact with peers and instructors. It has been found in earlier studies that students may feel isolated in the online environment and will value interaction with instructor and collaborative activities with other students (Chakraborty et al., 2014; Salazar, 2010).

Using multiple forms of online activities and tools increases online engagement (Sun & Rueda, 2012). Also, purposeful collaborative activities are positively related to both grades and persistence leading to meaningful learning and increased graduation rates (Kuh et al., 2007). Respondents in this study valued having multiple project-based activities and being assessed in multiple ways, which is consistent with previous research. In the present study students also valued "engaging in conversation online (e.g., chat, discussion, email)". This result is in alignment with Dixson's (2010) findings that students valued multiple ways of interacting with peers and instructors and being involved in multiple activities resulted in higher engagement in their course.

For the skills engagement factor, the highest ratings received were "listening/reading carefully," "taking good notes over readings, PowerPoints, or video lecture," and "being organized." The higher ratings of these skills are aligned with suggestions by several researchers regarding the importance of course design, with students wanting a common structure for organization of online courses (Young & Norgard, 2006) and what drives the development of autonomous

learning through the practice of engagement (Pascarella & Terenzini, 2005). These findings may suggest that students perceive that links in the course design and other factors allow for more opportunities for organization, but they are less motivated with "staying up on the readings," "studying on a regular basis," and "looking over class notes between getting online to make sure I understand the materials" (autonomous learning practices). Justification for this finding may be hinted at in the focus group as some students indicated that while online programming is flexible, at times one must remain motivated to keep up with the routine responsibilities (e.g., readings).

Finally, in the performance engagement factor of the survey, students indicated that the two items "doing well on the tests/quizzes," and "getting a good grade", were both important. This suggests that the students are motivated by extrinsic rewards like "good grades" that relates to doing well in the courses and is consistent with instructor feedback and presence that relates to extrinsic motivation (Handelsman et al., 2005) and improved student satisfaction with online course and online programs. These results suggest that students are likely to highly engage when extrinsic rewards (e.g., timely feedback, verbal and social activities that produce rewards, approval, or validation) are present in online courses or programs.

Limitation and Future Research

Findings from this study provide insight on student's perceptions of engagement in an online M.EdSE program. However, interpreting these findings should be viewed with caution, based on limitations within the study. First, the numbers of participants are limited by the nature of the program's population; therefore, studies on this topic will warrant a larger sample of participants to assist with generalizability. Second, this study focused on one university's program which also limits the generalizability of the findings. Third, a survey was used to collect a portion of the information. Therefore, the study has its typical limitation associated with survey methodologies to collect information (Visser, Krosnick, & Lavrakas, 2000). Another limitation is that this study used interviews through focus groups to report data. Self-reporting can elicit a biased response by the participant (Crewsell, 2007) and can be biased based on the presence of the researcher and/or the nature of the topic. The author attempted to eliminate any bias by defining the nature of the study for participants and following up with participants if there were misunderstandings or clarification needed about a response. The authors also discussed any apparent correlation between the survey and focus group responses to justify the findings reported from the survey. However, it is recommended that additional research on this topic should consider other data collection methods that will examine the perceptions and experiences of students enrolled in online courses and programs. Overall, we believe the findings reported are of value to the literature about online student engagement, particularly to new and developing online special education teacher preparation programs.

Future research should attempt to increase the participant pool for greater impact on stakeholders and consider collecting information from students, instructors, and other academic stakeholders. While the qualitative data in this study helped to highlight apparent links in students' perception of engagement in the online program (e.g., applying course material to life); this data also helped to note continued challenges for students (e.g., interaction with other students). Future quantitative and qualitative investigations may go deeper in addressing some of the following questions: What activities correlate to which engagement factor and creates meaningful activities

and learning experiences for students in online programs? What types of activities do both students and instructors in an online program value as engaging and meaningful? Does student academic performance increase when it is linked to student engagement? Are special education teachers better prepared to work with students with disabilities when engagement is higher in their preparation programs? And, does using a UDL framework approach to online courses truly increase student engagement and outcomes? Finally, the findings from this study suggest that teacher training programs, particularly in special education, should support programs that are *currently* online or *seeking* to go online. Therefore, future investigations should review distance education programs to help predict retention in online learning courses. Most importantly, engagement in online courses should be understood to enhance student learning.

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