

Book Chapter

Ready or Not? A Pilot Study of Graduate Students' and Instructors' Perceptions of the Effectiveness of Online Support Modules for Enhancing Academic Performance

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Abstract

Since the beginning of the twenty-first century, graduate studies and the adult students pursuing those studies have drastically changed, creating a new landscape of challenges to success for students and faculty alike. Online learning is fast becoming the norm in graduate studies of education rather than the exception, creating barriers in the form of lost community, looser connections between graduate students and faculty, and a shifting focus on student accountability to enter programs with

requisite skills far beyond their counterparts of the past. This study explored the use of online support modules to strengthen deficient skills among graduate students in a fully online Education Specialist program. The use of modules to address issues with academic writing, APA style, locating academic literature, synthesizing studies, and other preparation to write literature reviews proved a valuable and time-efficient tool for managing the remedial needs of students at the graduate level. A survey method was applied to collect data from students and faculty, followed by a thematic analysis of the results. Both students and instructors positively received these support modules. Furthermore, perceptions from both groups highlight the need for further exploration of means to provide modern support for an ever-changing adult student body.

Keywords

Online Learning; Academic Support; Graduate Students; Higher Education

Introduction

Throughout post-secondary and post-graduate programs (undergraduate and graduate programs in the United States, respectively), students come to school less prepared for academic challenges [1,2]. A plethora of research has found that undergraduate students enter postsecondary institutions with a lack of significant background knowledge and the requisite skills to acquire new knowledge, much less perform the academic tasks expected [3-5]. Graduate-level students are not immune to this phenomenon—unpreparedness for the rigors and demands of graduate programs—and face additional challenges as adult learners [6].

While it is a line of inquiry that needs further investigation, research suggests a lack of academic skills and abilities is a root cause for poor graduate student success, and that lack of success applies to the departure of adult learners due to eroded persistence [7,8]. As so aptly stated, “Depending on the graduate program, students may need substantial disciplinary knowledge

and/or academic skills to be prepared to pursue a graduate degree” [9] (p. 422). Adding to this conundrum, graduate students often lack a host of skills, including managing their time, solving problems, and abstract thinking, to perform the learning tasks required for graduate degrees [10]. As adult learners, those same students are also balancing life with jobs and family, putting even more strain on their ability to perform in formal studies [11]. Moreover, gaps in pursuing a graduate degree impact the necessary skills to succeed [12]. Subsequently, graduate faculty face the dilemma of providing remediation or potentially lessening course assignments’ rigor and high expectations [13].

In recent years, the context of higher education has changed. Brought on by technological advances, more students are seeking an online degree versus a face-to-face classroom [14]. According to the annual report from the United States’ National Center of Educational Statistics (2022), enrollment in online courses for postbaccalaureate students increased between 2019 and 2020 due in part to the disruption of COVID-19 when universities moved face-to-face courses online to E-learning platforms [15]. Specifically, 71%, or 2.2 million postbaccalaureate students, enrolled in at least one online course, while 1.6 million (52%) enrolled exclusively in online courses for 2020. In 2019, the report showed that 42%, or 1.3 million postbaccalaureate students, enrolled in at least one online course, while 1 million (33%) took only online courses. Coupled with the growth in the number of students enrolled in online courses was a change in the age distribution of online learners [16]. According to the literature, 38% of postsecondary students are adult learners over 25 years of age, and 25% are over 30 years of age [16]. With more students taking online courses in higher education due to efficiency, student retention and support have garnered attention in higher education, as student retention rates have not kept up with the increase in enrollments [17].

Due to the proliferation of technology, online education has also become a preferred learning mode for many graduate students [18,19]. Despite the flexibility that online learning offers, it has challenges [20,21]. Research has shown that online education

contributes to feelings of isolation, a lack of community, poor communication between students and instructors, and attrition [22-24]. While a great deal of research over the past decade has focused on the outcomes, support, and success of online education those studies have placed the primary focus on undergraduate students, largely ignoring the growing numbers of graduate students pursuing fully online degrees. Using online learning platforms can be daunting for some instructors [25,26]. Researchers posit that not only must online instructors know their technology, but they must also be competent to effectively utilize it to teach online [27]. Issues of time to invest in effective online pedagogy and the time needed to develop quality materials and resources have been reported [28,29]. The distinct differences in graduate education expectations and graduate student demographics such as family and work/life balance demand that instructors step away from the literature on undergraduate supports and begin exploring approaches that are specific to the needs of graduate students in online degree programs.

Issues and Challenges for Success in Graduate Studies

Graduate school is not a walk in the park. Faced with many issues, both in and out of the classroom, some graduate students struggle and leave school without completing their degrees. An extensive longitudinal study that investigated college graduates who pursued graduate degrees over ten years showed that frequently cited reasons for dropping out of school were “changes in family status (30%), job and/or military conflict (17%), dissatisfaction with the program (16%), the need to work (14%), personal problems (13%), and other financial reasons (12%)” [30] (p. 40). Only 1% of the study’s participants cited academic reasons for leaving their graduate programs. More recent studies reflect similar findings. Many online students have full-time jobs, families, and financial obligations that present multiple challenges and mental stress, such that some students require additional course support to be successful [22,23,31].

Research has further found that motivation is key to graduate degree completion. Graduate students must be motivated to put

forth the effort and time to address the complex tasks in graduate school [32]. Furthermore, motivation is linked to graduate students' academic success [32]. In other words, when graduate students are motivated to succeed academically, the odds of dropping out of school are reduced, and academic confidence increases. Academic confidence enables graduate students to obtain new knowledge and skills [33]. Conversely, research has shown that a lack of academic confidence correlates to poor academic performance [34]. Subsequently, it can be argued that graduate students must possess the academic confidence to succeed and the motivation to learn. Research has shown that when these attributes are missing, graduate students will discontinue their degree programs [34].

Post-Graduate Students as Adult Learners

Life-long learning can take various forms: informal, non-formal, self-directed, and formal [35]. Self-direction is a key feature of the learning environment in formal graduate and post-graduate studies. Students are responsible for navigating and making sense of the concepts and requisite skills, with the instructors acting as facilitators of the process [36]. Self-directed learning is a critical element of andragogy, the fundamental study of adult learning [37,38]. In formal settings at the advanced degree level, there is a convergence of traditional epistemologies of learning/learners with more specific ecologies of adult learners—those who are over the age of 25, come from a wide variety of backgrounds and experiences, and pursue continuing education for various personal and professional reasons [11,39]. As such, adult learners come to the table with more life experience and often with diverse expectations, needs, and levels of preparation for formal study. Adult learning is multidimensional due to the converging factors that impact lifelong learning [40]. For example, graduate students in education are typically experienced, full-time classroom teachers who balance work with busy home lives while seeking to expand their knowledge base and expertise in pursuit of higher credential levels and increased pay potential [37]. Therefore, providing relevant curriculum and supports specific to adult learners and their needs is a critical focus for their success.

Support for Learning in Online Graduate Programs

For adult learners, online education requires additional considerations in design and instruction [37]. Planning thus involves both physical considerations, such as supporting information and accessibility, as well as focusing on key principles of adult learning, such as including the learner in the planning process as an informed stakeholder, providing feedback experiences where students can learn in context and from mistakes, ensuring the actions and concepts in the course are adequately moving toward the desired course outcomes, and being centered around problem-solving and practice application [30,41]. Graduate programs in education often connect multiple learning theories within adult learning, including experiential learning, where the learner draws from their teaching experience to define and explore problems [42]; self-directed learning, wherein scaffolds are put in place to guide the learning process, but the learner essentially controls the pace and direction of their learning amidst boundaries and supports of formal learning [43]; and transformative learning, wherein the learner begins to shift from the role of practitioner/teacher (the traditional classroom teacher role) to one of teacher leader/researcher, grounding past experiences and critical reflection to take on a more empowered and active role in leading other teachers and conducting research [44].

In general, student support sessions are designed to help learners who struggle academically, to prepare learners for course rigor, including the rigors of learning online, and to support their efforts to succeed in individual courses and their degree programs [45,46]. The lack of adequate support is often reported as a reason for not completing online studies [47,48]. While an early study suggested online intervention can help increase student success, a scant amount of research exists on online intervention methods for adult learners and other students in formal settings above the undergraduate level [49].

One group of researchers developed a virtual boot camp as an orientation to an online program for doctoral students in nursing [50]. The virtual boot camp consisted of modules to teach APA

and academic writing, conduct a literature search, formulate research questions, learn the components of a dissertation, and navigate the learning management system. Based on feedback from students and instructors, participants reported positive feelings about the virtual boot camp. The researchers concluded that more support is needed for online graduate students [50].

The literature recommends strategies that course instructors can implement to improve student learning. Online instructors should prepare their students before the first day of class through email regarding the course expectations, materials needed, and time to navigate the learning management system [51]. Furthermore, online discussion boards effectively promote student interaction and simultaneously build a sense of community [52]. Arasaratnam-Smith and Northcote (2017) add that online graduate students must feel a sense of belonging, which can be achieved when instructors plan multiple opportunities for student-to-student and student-to-instructor interaction [53]. Research has further found that timely and quality feedback positively impacts graduate student performance in online programs [54]. While these are also relevant in many ways to face-to-face learning, the nature of online learning means differences in effectiveness and the absence of more holistic interpersonal interactions and connections among faculty and students.

Theoretical Framework

Tinto's Theory of Student Departure provides the theoretical framework for this study [8]. Built upon anthropological underpinnings, the Theory of Student Departure specifically examines the positioning of the learner among relevant groups as a driving factor in their ability to persevere on a particular learning pathway [55]. In the case of Ed.S. students, the transition from the role of classroom teacher and early degree programs focused solely on practice must be shifted effectively to a new positioning and mindset of teacher leaders and researchers in practice. Failure to make that transition successfully negatively impacts persistence and, thusly,

performance and retention in the Ed.S. program, both of which have increased attention in modern higher education [56]

In his theory, Tinto posited that there are three barriers to student persistence: (1) academic struggles, (2) divergence in goals, and (3) inability to integrate appropriately into their new situation [55]. Furthermore, Tinto specifically addressed the need for group-specific approaches and supports for adult learners as a target for the Theory of Student Departure [8,57]. This study approaches the problem of student persistence by investigating the connection between students' motivation and faculty commitment to permit students to succeed in their academic environment and prevent student departure. Specifically, the study focuses on all three angles among adult students in an Educational Specialist Program by providing academic support that aid students as they integrate into the context of learning, foster feelings of belonging in the program, and bridge areas of concern where students frequently struggle to connect their present ways of knowing and doing with expectations and goals that, to them, are novel.

Given our interest in obtaining the perceptions of the graduate students and their instructors to determine how to support and encourage their persistence in the program, Tinto's Theory of Student Departure provided an appropriate conceptual framework to ground the interpretive nature of the study. Utilizing the conceptual framework provided by Tinto, this study utilized a qualitative descriptive research design that permitted the researchers to investigate the phenomena as described by the participants in their own words.

Context of the Study

There is a unique level of practitioner-focused graduate study in education that is not present in other fields: the degree of Education Specialist (Ed.S.). The Ed.S. is situated between the Master's and Doctoral levels of study, representing a space wherein non-traditional adult learners can expand their pedagogical skills and transition from classroom practitioners to more research-oriented leadership practices that will inform their

teaching. The unique positioning and nature of Ed.S. programs draw adult learners already underway in their careers as teachers, who may have been out of college/university courses for many years and often lack experience with the level of writing and research involved in the program of study. As a result, these learners often need additional support and scaffolded structures to drive persistence and create community among unfamiliar expectations and requirements.

The Education Specialist (Ed.S.) program that is the focus of this article is a 33.0 credit-hour program for graduate students seeking an advanced degree in Teaching and Learning. The program of study is designed to provide an opportunity for students to become critical consumers of educational research, thus bridging the gap between theory and practice in their professional discipline to improve learning experiences for their P-12 students. Due to changes in graduate admission standards made by our institution that included the removal of standardized test requirements, the Ed.S. program has encountered a drastic increase in enrollment, and with this increase, faculty have noted an increase in the number of students who lack the readiness skills to succeed.

Research Questions

The purpose of this research was to investigate graduate students' and course instructors' perceptions of the effectiveness of online support modules for enhancing student academic performance as a pilot study. Based on the researchers' interests and the dearth of research on this line of inquiry, the research questions that guided the study were:

- What are graduate students' perceptions of online support modules in a fully online Education Specialist program?
- What are Ed.S. instructors' perceptions of online support modules in a fully online Education Specialist program?

Materials and Methods

Support Modules

During informal discussions in program meetings, faculty teaching in our graduate program noticed academic skills with which our students struggle. We noted these in our respective courses, and commonalities began to emerge. To address the academic skills that needed remediation, we designed and implemented a series of online modules, called support modules, to be embedded in major courses in our program related to the skills we have observed needing remediation. Each support module offered various learning activities and assessments so that students could apply their understanding of the learning outcomes. As such, the online support modules address the following topics: locating academic literature, APA 7th Ed., academic writing, including style, grammar, and mechanics, and synthesizing and paraphrasing research in preparation for writing a review of the literature.

To initiate the support modules, the program faculty first identified the courses in which to embed the support modules and then determined the timeframe for their completion. Based on the 16-week semester for our institution, we identified the critical assignments per course that are assigned early each semester. After much discussion about utilizing these modules within the courses, we determined that students who received a below-satisfactory grade on one of the early-identified assignments in the designated courses would be required to complete the support modules. The time to complete the support modules would span approximately six to eight weeks from the time the modules were assigned. In the inaugural semester of implementation, 25 students were assigned and completed the support modules. Of those, 13 students responded to the voluntary, anonymous survey about their perceptions of the modules. Additionally, four program faculty who were the course instructors and thus the responsible people who assigned the modules participated in the survey and provided feedback.

Survey

Based on qualitative methodology, this study utilized a qualitative descriptive research design that permitted the researchers to investigate the phenomena-graduate students' and instructors' perceptions of the effectiveness of support modules to enhance students' academic performance. To garner feedback on the perceptions of the effectiveness of these modules, data were collected through two surveys at the end of the semester: (1) a survey to be completed voluntarily only by those students who completed the modules as a part of their course (see Appendix A) and (2) a survey to be completed by all program faculty who taught courses in which the modules were deployed as student supports (see Appendix B). The two surveys were administered through Qualtrics, an online research survey portal, and all responses were anonymous.

Analysis

To answer the research questions, inductive coding was manually applied to the students' and instructors' survey responses [58]. Beginning with open coding, the three researchers read each word, sentence, and paragraph to determine what the data suggested regarding the modules. Open coding was not driven by a particular theory but rather by the re-reading of the gathered data to see what possible themes emerged from the responses. Following the initial round of open coding, the researchers met to discuss the codes that were derived and align the reviews into a single document. Axial coding involved scrutinizing the data more closely to identify potential labels and patterns in the responses for both the students and the instructors relative to the modules that emerged from the analysis of the survey responses [59,60]. Thinking comparatively in terms of what categories were the same and what categories were different per research question, three themes emerged from data analysis for research question 1 and three themes emerged from data analysis for research question 2 (see Table 1) [59-61].

Table 1: Students’ and instructors’ perception themes.

Graduate Students’ Perceptions
Graduate students’ awareness of skills needing improvement
Support modules were helpful
Suggestions for improvement
Instructors’ Perceptions
Highlighted the skills needing improvement
Support modules were helpful
Suggestions for improvement

Results

Perceptions of Program Students

Research question 1 asked: How do graduate students perceive the support modules as enhancing their academic performance? Based on the analysis of the data, the first theme that emerged was an “awareness” of skills that needed improvement to be successful. From participation in the support modules aimed at enhancing academic performance, the responses indicated that the support modules served as a reminder of the academic skills that were insufficient due to a lack of preparation or time lapse since the last degree completion. As one candidate explained:

It has been a decade since I last performed research for my master’s program, and there was no course before this that allowed us to practice and review these research skills. Thankfully, I am gaining confidence as the semester continues. These support modules have been a part of gaining that confidence.

Further findings of the analysis showed the modules served to address academic gaps that graduate students experience, particularly those who have been out of academia for a while. For example, students’ responses indicated the support modules brought awareness to the need to improve their academic writing, with three sharing that they did not feel they had ever been strong writers and one adding, “Citation is one of the most complex parts of writing, and to this day, I am still working hard on understanding how things should be cited”. Another perspective that surfaced from participation in the support modules was the difficulty in learning new ways to use the styles

they had learned, specifically changing from older editions of APA style to the current 7th edition. As one student noted, “I am not a strong writer and find that many writing styles have changed over time”. In this study, data analysis further found that as the students participated in the support modules, they became aware of the importance of academic language, such that even basic writing skills such as “grammar, punctuation, and subject-verb agreement” were skills needed to be successful.

The second theme that emerged through our analysis of students’ responses indicated an overall positive response to the modules as “helpful”. Despite the required nature with which they were assigned, participants perceived overall satisfaction by indicating the long-term impact of the modules was helpful for their academic and/or professional success. Words such as “helpful” and “significantly beneficial” were repeatedly stated in their responses. Additionally, specific elements were highlighted as standing out to candidates, including some specific to research processes. One candidate noted, “I found the articles and activities on research articles, primary and secondary sources, and APA to be very helpful”, which was echoed in three additional responses. While another explained, “It was good to review grammar rules, where to find research articles, to practice correcting citations and references, as well as to work up a literature review using the articles I selected”. Several students referred specifically to the supports for APA style and writing by sharing, “I found the most helpful were (sic) all the links that provided insight on how to write, cite, and format correctly. I learned a lot about the in-text citation and APA 7th edition”. Common throughout the responses was an appreciation for the time to review and renew skill understandings; as one student described, “It just reviews and refreshes everything. After completing these modules, I feel confident that I will find out what I did was my mistake. I give them 9 points out of 10”.

The third theme to emerge from data analysis were suggestions for module improvement. These suggestions will be taken into consideration in future iterations of the modules. One criticism of the modules involved the use of short quizzes at the end of each section. As one student stated, “I did not find the built-in

quizzes to be helpful since you just keep taking them to get a passing score”. Numerous students confirmed that the quizzes embedded in the modules were time-consuming and did not yield the support they perceived as beneficial to their academic enhancement.

Other students focused on the timing of the modules, and as one student shared, “If I had completed the modules in the beginning when I started my classes, it would have had a greater impact. I think that when they are offered, it would make a difference as well”. Since the modules were newly implemented in the program, it is likely that the student did not benefit from this opportunity earlier in their program. It is also noted that in the first iteration, the modules were assigned only to students who underperformed on key assignments, often several weeks into the term. However, the program faculty initially agreed to assign the modules based on the identified assignments in specific designated courses early in the semester. Hence, the program faculty will ensure this procedure is followed to establish the fidelity of the support modules, a quality control measure to enhance positive student academic performance.

Perceptions of Program Instructors

The second research question asked: What are Ed.S. instructors’ perceptions of the effectiveness of support modules on students’ performance? From data analysis, the instructors’ responses to the survey questions offered further insight into the effectiveness of the support modules and closely aligned with the themes that emerged from the students’ responses. Specifically, the instructors’ responses (1) highlighted the areas in need of improvement, (2) the support modules were helpful for students, and (3) suggestions were offered to strengthen the support modules to enhance student academic performance.

For several terms, program faculty observed areas in which students struggled upon entering the program that could be addressed by the modules. As a result, the learning objectives for the support modules were precisely designed based on the academic areas of struggle. From the data analysis, consistent

findings revealed that the instructors agreed that the support modules “highlighted the areas in need of improvement”. As one instructor stated, “The candidates struggle with academic writing and how to paraphrase and cite accurately”. A second response added that “Some students do not have a strong background in basic research skills such as scholarly tone, citations/paraphrasing, and synthesizing sources to create a narrative”. Since academic research and writing are primary performance areas in post-graduate work, students who do not have these requisite skills tend to begin well behind those who have more experience and practice. Additionally, students’ concentrations in the Ed.S. in Teaching and Learning program range from special education to elementary, middle, and high school levels, and the day-to-day usage of research and writing varies heavily in academic level, readability, and tone.

The instructors’ perceptions of the modules to address their concerns with the academic performance of their students were overall positive, with several using terms such as “useful” and “valuable” to describe the content and outcomes. As one instructor explained:

The focus on APA formatting was very useful, as was the one on primary sources. I did notice that after the modules were completed, I had fewer issues with the APA style elements and did not have to refer students to primary/secondary review in the annotation bibliography as I have had to do in the past.

Instructors in the program highly value supporting the changing needs of our students but, at the same time, share concerns that taking instructional time away from the course progression for remediation would sacrifice the rigor and depth of the program. The modules appeared to represent a well-received compromise on time and focus, with faculty noting that “these modules are valuable because they help students think critically about course material while encouraging them to write, grasp, organize, and integrate prior knowledge with new concepts”.

One instructor noted that they did not see immediate improvement from the students who completed the modules and

suggested a rating of “5 out of 10” based on the performance of their particular students, noting, “I did not really think any of the modules were not helpful in some way; some just seemed to click more with students than others. Several students who completed the modules still struggled with academic writing overall”.

Parallel to the students’ commentary on the quizzes’ usefulness, faculty stated, “The results of the embedded quizzes did not come to me. I did not find those useful”. To help improve the modules, the instructors emphasized a need for the expansion of topics, with one sharing, “There needs to be a greater emphasis on synthesizing and paraphrasing research” and a second confirming, “While paraphrasing is covered, it might be prudent to add a specific module that addresses the breadth of what is represented by the term “plagiarism” and some key points on how to avoid this”. As the implementation continues to evolve, we will develop ways to measure the students’ long-term academic success in the program and the specific impact of the support modules on student performance in each targeted area.

Discussion

In this study, we explored graduate student and instructor perceptions of the effectiveness of virtual support modules in enhancing academic performance in online graduate courses in education. Through data analysis, three overarching themes emerged among both groups: (1) candidate struggles with returning to graduate school; (2) the helpfulness of the modules in supporting the academic success of graduate candidates; and (3) suggestions for improving the modules and/or their delivery in future semesters. These themes provided data-supported insight to answer the research questions.

Research Question One: Graduate Student Perceptions

How do graduate students perceive the support modules as enhancing their academic performance? Overall, the students reported positive feelings about the support modules and recognized their need for support in academic skills after gaps in

their schooling and other factors [12,50]. Similar to participants in other studies, these students faced external struggles that impacted their performance when returning to graduate school, including balancing their personal lives with academic work and having experience with changing style guides and expectations specifically [22,23,31]. However, they expressed that the modules provided a time-sensitive and brief refresher and/or orientation to key elements of academic writing that were helpful and contributed to their academic confidence [33,34]. Additionally, students recognized the importance of these academic skills and suggested that support modules be made available early in the term to build skills and confidence [33,45,46].

Research Question Two: Instructor Perceptions

What are Ed.S. instructors' perceptions of the effectiveness of support modules on candidate performance? We found that faculty recognize the struggles candidates face as they return to graduate school and similarly identify the manifestations of struggles with academic skills that are largely unique to this level of study and often result in low rates of success or student departure from graduate programs [7,34,48,56]. Furthermore, instructors noted a positive shift in student performance in targeted areas following the completion of the modules, providing additional support for remedial skills without sacrificing the course's rigor. The concern over program rigor and expectations had been raised in earlier program planning meetings [13]. Finally, suggestions for improvement included expanding topics where students struggle with writing and research to include others, such as plagiarism and synthesis of research, skills identified in several studies as critical to graduate school success, and making the assignment of the support modules available early in the term [7,9,10].

Implications and Future Research

In the changing landscape of graduate education, pedagogy and practice must evolve to best support the development of academic skills among students. As more students pursue online

educational opportunities, faculty must rise to the challenge of meeting students where they are while maintaining rigor and high expectations in graduate studies. In addition to effective practices such as frequent communication, opportunities for building connections, and robust course design, having engaging support mechanisms for areas where students traditionally struggle is a priority. Compounding the external struggles and pressures of balancing full lives with graduate coursework, adult post-graduate students face additional challenges due to the stress of the COVID pandemic, both personally and professionally.

While the number of adults pursuing online degrees or having online components to their programs of study is steadily increasing, there is still relatively little literature addressing the effectiveness of online intervention methods, and even fewer that target students at the graduate level. As such, we recommend that researchers and programs internally focus on the effectiveness of attempts to provide online interventions, highlighting such elements as how those approaches are embedded, what topics are critical at what time in the program progression, and how those interventions impact adult students' longer-term academic success and progress. We will use the findings from this research, including the feedback on improving the modules, to continue to strengthen the content and the process. Specifically, we will not be utilizing embedded quizzes moving forward, and we will work to provide more support in the area of synthesizing information. Further, we will be looking at when we assign the modules to offer them earlier in the semester. We will continue to offer and bolster modules related to APA, grammar, and developing literature reviews based on participant feedback.

Conclusions

This study aimed to explore graduate student and instructor perceptions of online academic writing support modules in a post-graduate Education Specialist degree program that serves adult learners. Observations of widespread student struggles with academic writing skills such as utilizing APA style standards,

paraphrasing, rigorous language, and fundamental research skills led program instructors to develop and implement support modules for deployment supplemental to required coursework. The implementation of those modules led to the need for an assessment of perceptions to revise and determine their effectiveness. Through survey data collection and analysis, we determined that the virtual modules provide effective student support by increasing or refreshing student knowledge of critical areas of academic writing while maintaining high program expectations and course rigor. Graduate students in education often come into our programs with various challenges to success, including time management, full-time jobs, established lives, and family, and often have been out of school for extended periods. In the age of online education, it is even more important to find ways to build academic confidence in our students and provide support that is equal to or exceeds what we would be able to provide in the face-to-face classrooms of the past. Deployment of asynchronous virtual modules can both target specific areas of need based on student performance in those areas and provide a flexible extension of the learning that does not further encumber students who may already be struggling to adjust to program requirements at the post-graduate level. As faculty, we should continue to expand and improve our approaches to humanizing online asynchronous learning through creative engagement in student-focused support, community building, and best practices.

References

1. Mascolo MF, Castillo J. The origins of underperformance in higher education in America: Proximal systems of influence. *Pedagog. Hum. Sci.* 2015; 5: 1–40.
2. Stern GM. Study explores why many high school graduates are not ready for college. *Hisp. Outlook High. Educ.* 2013; 23: 20–21.
3. Brower RL, Nix AN, Daniels H, Xinye H, Jones TB, et al. A pedagogy of preparation: Helping underprepared students succeed in college-level coursework in community colleges. *Innov. High. Educ.* 2021; 46: 153–170.

4. Jackson J, Kurlaender M. College readiness and college completion at broad access four-year institutions. *Am. Behav. Sci.* 2014; 58: 947–971.
5. Tierney WG, Sablan JR. Examining college readiness. *Am. Behav. Sci.* 2014; 58: 943–946.
6. Armstrong RJ, Hart DL. Why online students struggle in higher education. *FDLA J.* 2021, 6, 1–12. Available online at: <https://nsuworks.nova.edu/fdla-journal/vol6/iss1/8>
7. Austin AE, McDaniels M. Preparing the professoriate of the future: Graduate student socialization for faculty roles. In *Higher Education: Handbook of Theory and Research*. Dordrecht: Springer. 2006; 21: 397–456. Available online at: https://link.springer.com/chapter/10.1007/1-4020-4512-3_8
8. Tinto V. *Leaving College: Rethinking the Causes and Cures of Student Attrition*, 2nd edn. Chicago: University of Chicago Press. 1993. Available online at: <https://eric.ed.gov/?id=ED371658>
9. Gilmore J, Wofford AM, Maher MA. The flip side of the attrition coin: Faculty perceptions of factors supporting graduate student success. *Int. J. Dr. Stud.* 2016; 11: 419–439.
10. Johnston L, Sampson KA, Comer K, Brogt E. Using doctoral experience survey data to support developments in postgraduate supervision and support. *Int. J. Dr. Stud.* 2016; 11: 185–203.
11. Southern Regional Education Board-SREB. *Who Is the Adult Learner?* 2022. Available online at: <https://www.sreb.org/general-information/who-adult-learner>
12. Bussell H, Schnabel J, Rinehart AK. Meeting graduate student needs: An exploration of disciplinary differences. *Public Serv. Q.* 2020; 16: 213–233.
13. Schnee E. “In the real world, no one drops their standards for you”: Academic rigor in a college worker education program. *Equity Excell. Educ.* 2008; 41: 62–80.
14. Palloff RM, Pratt K. *Lessons from the Virtual Classroom: The Realities of Online Teaching*, 2nd ed. Hoboken: Jossey-Bass. 2013.
15. U.S. Department of Education, National Center for Education Statistics. *The Condition of Education* (NCES

- 2022-144). Washington, DC: U.S. Government Printing Office. 2022. Available online at: <https://nces.ed.gov/pubs2022/2022144.pdf>
16. Snyder TD, De Brey C, Dillow SA. Digest of Education Statistics 2016 (NCES 2017-094). Washington, DC: National Center for Education Statistics. 2018. Available online at: <https://eric.ed.gov/?id=eD580954>
 17. Stover C. Measuring- and understanding student retention. *Distance Educ. Rep.* 2005; 9: 1–7.
 18. Allen IE, Seaman J. *Grade Change: Tracking Online Education in the United States*. Boston: Babson Survey Research Group. 2014. Available online at: <https://eric.ed.gov/?id=ED602449>
 19. Fredericksen EE. A national study of online learning leaders in U.S. community colleges. *Online Learn.* 2018; 22: 383–405.
 20. Berry GR. Learning from the learners: Student perception of the online classroom. *Q. Rev. Distance Educ.* 2018; 19: 39–56.
 21. Lee K. Rethinking the accessibility of online higher education: A historical review. *Internet High. Educ.* 2017; 33: 15–23.
 22. Gayton J. Factors affecting student retention in online courses: Overcoming this critical problem. *Career Tech. Educ. Res.* 2013; 38: 145–155.
 23. Lee Y, Choi J. A review of online course dropout research: Implications for practice and future research. *Educ. Technol. Res. Dev.* 2011; 59: 593–618.
 24. Boston W, Ice P, Burgess M. Assessing student retention in online learning environments: A longitudinal study. *Online J. Distance Learn. Adm.* 2012; 15: 1–6.
 25. Conrad D. The plain hard work of teaching online: Strategies for instructors. In: Bullen M, Janes D, editors. *Making the Transition to E-Learning: Strategies and Issues*. Hershey: Information Science Publishing. 2007; 191–207.
 26. Conrad RM, Donaldson JA. *Engaging the Online Learner: Activities and Resources for Creative Instruction*. Hoboken: John Wiley & Sons. 2011. Available online at: <https://eric.ed.gov/?id=ED520278>

27. DeCoito I, Richardson T. Teachers and technology: Present practice and future directions. *Contemp. Issues Technol. Teach. Educ.* 2018; 18: 362–378.
28. Shannon S, Doube L. Valuing and using web supported teaching: A staff development role in closing the gaps. *Australas. J. Educ. Technol.* 2004; 20: 114–136.
29. Spector JM. Time demands in online instruction. *Distance Educ.* 2005; 26: 5–27.
30. U.S. Department of Education, National Center for Education Statistics. *The Condition of Education (NCES 2006-072)*. Washington, DC: U.S. Government Printing Office. 2006. Available online at: <https://nces.ed.gov/pubs2006/2006071.pdf>
31. Evans TM, Bira L, Gastelum JB, Weiss LT, Vanderford NL. Evidence for a mental health crisis in graduate education. *Nat. Biotechnol.* 2018; 36: 282–284.
32. Pulford BD, Woodward B, Taylor E. Do social comparisons in academic settings relate to gender and academic self-confidence? *Soc. Psychol. Educ. Int. J.* 2018; 21: 677–690.
33. Sander P, de la Fuente J. Modelling students' academic confidence, personality, and academic emotions. *Curr. Psychol. J. Divers. Perspect. Divers. Psychol. Issues.* 2022; 41: 4329–4340.
34. Ireson J, Hallam S. Academic self-concepts in adolescence: Relations with achievement and ability grouping in schools. *Learn. Instr.* 2009; 19: 201–213.
35. Mocker DW. *Lifelong Learning: Formal, Nonformal, Informal, and Self-Directed*. ERIC Clearinghouse on Adult, Career, and Vocational Education, National Center for Research in Vocational Education, Ohio State University. 1982; 241. Available online at: <https://eric.ed.gov/?id=ED22072>
36. Loeng S. Self-directed learning: A core concept in adult education. *Educ. Res. Int.* 2020; 2020: 3816132.
37. Cercone K. Characteristics of adult learners with implications for online learning design. *AACE Rev.* 2008; 16: 137–159.
38. El-Amin A. *Andragogy: A theory in practice in higher education*. *J. Res. High. Educ.* 2020, 4. Available online at: <https://www.ceeol.com/search/article-detail?id=922589>

39. Manning G. Self-directed learning: A key component of adult learning theory. *Bus. Public Adm. Stud.* 2007; 2: 104.
40. Merriam SB. Adult learning theory for the twenty-first century. *New Dir. Adult Contin. Educ.* 2008; 2008: 93–98.
41. Roy S, Halder M. Andragogy, its principles and outcomes in higher education. *Educ. Issues Chall.* 2021; 114. Available online at: <https://wip.tezcommerce.com:3304/admin/module/25/1644392352974.pdf#page=130>
42. Morris TH. Experiential learning—A systematic review and revision of Kolb’s model. *Interact. Learn. Environ.* 2020; 28: 1064–1077.
43. Bergamin PB, Bosch C, Du Toit A, Goede R, Golightly A, et al. *Self-Directed Learning for the 21st Century: Implications for Higher Education.* Cape Town: AOSIS. 2019; 470. Available online at: <https://books.aosis.co.za/index.php/ob/catalog/book/134>
44. Illeris K. Transformative learning in higher education. *J. Transform. Learn.* 2015; 3: 46–51.
45. Glazier RA. Building rapport to improve retention and success in online classes. *J. Political Sci. Educ.* 2016; 12: 437–456.
46. Hutchins HM. Instructional immediacy and the seven principles: Strategies for facilitating online courses. *Online J. Distance Learn. Adm.* 2003; 6: 1–11.
47. Cherif AH, Movahedzadeh F, Adams GE, Dunning J. Why do students fail? Students’ perspective. In *Proceedings of the 2013 Annual Conference of the Higher Learning Commission, Chicago, IL, USA.* 2013. Available online at: <http://sencer.net/wp-content/uploads/2016/10/WhyDoStudentsFailPresentation.pdf>
48. Levitz RN. 2015–16 National Online Learners’ Satisfaction and Priorities Report. 2016. Available online at: <https://files.eric.ed.gov/fulltext/ED602841.pdf>
49. Richardson J, Swan K. Examining social presence in online courses in relation to students’ perceived learning and satisfaction. *J. Asynchronous Learn. Netw.* 2003; 7: 68–88.
50. Cook J, Bishop M, Welch S, West D. Implementation of a “Virtual Boot Camp” to Facilitate Graduate Online

- Learning. SoTL Commons Conf. 2015; 127. Available online at: <https://digitalcommons.georgiasouthern.edu/sotlcommons/SoTL/2015/12>
51. Thistoll T, Yates A. Improving course completions in distance education: An institutional case study. *Distance Educ.* 2016; 37: 180–195.
 52. Covelli BK. Online discussion boards: The practice of building community for adult learnings. *J. Contin. High. Educ.* 2017; 65: 139–145.
 53. Arasaratnam-Smith LA, Northcote M. Community in online higher education: Challenges and opportunities. *Electron. J. E-Learn.* 2017; 15: 188–198.
 54. Farrell O, Brunton J. A balancing act: A window into online student engagement experiences. *Int. J. Educ. Technol. High. Educ.* 2020; 17: 25.
 55. Kuh GD, Kinzie JL, Buckley JA, Bridges BK, Hayek JC. *What Matters to Student Success: A Review of the Literature.* Washington, DC: National Postsecondary Education Cooperative. 2006; 8. Available online at: https://nces.ed.gov/NPEC/pdf/Kuh_Team_Report.pdf
 56. Reason RD. An examination of persistence research through the lens of a comprehensive conceptual framework. *J. Coll. Stud. Dev.* 2009; 50: 659–682.
 57. Burke A. Student retention models in higher education: A literature review. *Coll. Univ.* 2019; 94: 12–21.
 58. Demetriou C, Schmitz-Sciborski A. Integration, motivation, strengths and optimism: Retention theories past, present and future. In *Proceedings of the 7th National Symposium on Student Retention, Charleston, SC, USA.* 2011; 201.
 59. Bingham AJ, Witkowsky P. Deductive and inductive approaches to qualitative data analysis. *Anal. Interpret. Qual. Data Interview.* 2021; 133–146.
 60. Charmaz K, Thornberg R. The pursuit of quality in grounded theory. *Qual. Res. Psychol.* 2021; 18: 305–327.
 61. Birks M, Mills J. *Grounded Theory: A Practical Guide.* Washington, DC: Sage. 2015.

Appendix A

Ed.S. Support Module Reflection for Students

- What semester/year did you complete the Ed.S. Support Modules?
- For what course/assignment did you complete the Ed.S. Support Modules?
- Which portion of the modules did you find most helpful? What specifically did you learn or gain from these?
- What portions of the modules did you not find helpful? Can you explain why these were not helpful to you? (missing information, redundant, or other?)
- How do you envision these modules impacting your academic achievement in the course to which they were assigned?
- How do you feel these modules will impact your overall academic progress in the Ed.S. program?
- What is your overall view of the idea of online support modules to assist with academic support?

Appendix B

Ed.S. Instructors' Perceptions-Support Modules

- What semester/year did you assign the support modules?
- For what assignment/course did you assign the support modules?
- Which portions of the modules did you find most helpful to your candidates? What specifically did your candidates gain or learn from these?
- Which portions of the modules did you/your candidates not find helpful? Can you explain why they were not perceived as helpful?
- How do you envision these modules impacting your candidates' academic achievement in the course for which you assigned them?
- Were there any topics you would suggest be added to, deleted from, or edited in the modules?

- What is your overall view of the idea of online support modules to assist with academic support in the Ed.S. program?