Early Intervention for Struggling Online Graduate Students: Persistence Outcomes over Time

Jacqueline F. Lewis, Ashley Babcock, Tara J. Lehan, & Shirley Ritter
Northcentral University

Abstract

This study examined long-term persistence differences between three samples of first-year online graduate students to understand the impact an early intervention had on students who failed the first assignment in their first course. A Fisher's exact test showed no statistically significant difference in the likelihood of remaining enrolled at the institution approximately two years later after the initial intervention point across the three samples, $\chi 2(2) = 1.477$, $p = .48$. The results showed that nearly 50% of students first identified as eligible for the intervention were still active two years later. Therefore, interventions involving academic support may help online graduate students build connections within the university that at-risk students who did not have access to intervention.

Keywords: early intervention, academic coaching, online graduate students, academic support, student retention, persistence

Early Intervention for Struggling Online Graduate Students: Persistence Outcomes Over Time

Online education has become an increasingly attractive option, especially for graduate education, as it allows working adults a more flexible alternative that is not bound by location or time constraints (Mintz, 2019). Online education allows students, including those at traditional brick-and-mortar institutions, to pursue their educational goals from a distance; however, with colleges and universities closing campuses and moving to online learning in the face of COVID-19, larger numbers of students are taking classes online with or without a choice (Smalley, 2020). Although online education does provides a flexible online platform and ease of access, there are stumbling blocks (e.g., preparation, GPA, and online course outcomes) that can hinder a student's ability to complete their degrees online (Wladis et al., 2016). Additionally, the flexibility of online education demands that students be self-directed learners and advocates for themselves to ensure they seek out the resources needed for success (Babcock et al., 2019).

In completely online programs, retention rates, on average, are approximately 10% lower than that of brick-and-mortar programs (Burrus et al., 2019; Rockinson-Szapkiw, 2019). Students who possess greater self-direction and self-motivational skills can still find online education isolating, demanding, and unsettling in

nature without enough support (Burrus et al., 2019; LaPadula, 2003). Moreover, students in completely online courses may have limited access to the array of support services (e.g., learning centers, libraries, advising, transition/bridge programs) offered at their institution compared to students at brick-and-mortar campuses (Roddy et al., 2017). However, online students, including those in graduate programs, desire the same types of support that are offered to students in brick-and-mortar programs (Babcock et al., 2019). Therefore, along with student self-discipline, meaningful feedback, and the quality of faculty and student interactions, institutional support to students has been identified as one of the top factors that has an effect on online student retention (Gayton, 2015). In an effort to raise retention rates, many online programs employ a plethora of support strategies, such as early intervention programs, at-risk notifications, academic coaching, and/or tutoring, to ensure students stay in their courses until completion.

Although student persistence has been broadly examined (Budash & Shaw, 2017; Green, 2015; Lehan et al., 2018), the importance of online graduate persistence requires a worthwhile and focused undertaking. Most persistence research in higher education has focused on students in traditional face-to-face programs (Hachey et al., 2014). However, online graduate programs and students warrant scholarly attention, as they have unique characteristics and needs (Akojie et al., 2019). Somewhat

complicating the research is that a myriad of factors impact online students' decision to persist as well as the difficulty in tracking students once they withdraw (Fetzner, 2013; Layne et al., 2013; Stevenson, 2013; Willging & Johnson, 2009; Zahl, 2015).

Intervention Programs

Intervention programs have been used in higher education the past two decades, starting in community college and undergraduate programs (Gordanier et al., 2018). More recently, intervention efforts have spread to graduate education, including online graduate programs, as one way to support students who are at-risk for stopping out (Muljana & Luo, 2019). Intervention programs often fall into one of two categories—either supplying students with information about their status in a course, which serves as a way to prod students into being more active in their class, or requiring the use of additional academic support services (Gordanier et al., 2018).

At one open-access, graduate-focused online institution, a newly developed early intervention program involved a mix of both approaches. That is, students were (1) notified of their status after the first assignment in the first course and (2) encouraged to utilize academic support services to assist in their success. Given that interventions may be more effective when they are targeted (Harackiewicz & Priniski, 2018), a specific intervention point was determined due to historical evidence that suggested almost 80% of students who failed the first assignment in the first course left the

university by the fourth course (Lehan & Babcock, 2020). As a result of historical evidence and current data, students earning a failing grade on the first assignment of the first course became an indicator to prompt early intervention.

While data from an initial intervention point is helpful in determining if the intervention itself supported students in persisting through that specific course, tracking the same intervention group overtime can help glean a clearer picture of long-term persistence and eventual program completion. Tracking persistence longitudinally with the same sample of students allows for the better ascertainment of the resources utilized during students' tenure in a graduate program as well as determination of whether students completed the program or dropped/stopped out prior to completion. Therefore, the aim of this article is to follow-up on Lehan and Babcock's (2020) recommendation to understand the relationship more fully between participation in an early intervention program and longer-term persistence in online graduate students.

Method

The purpose of this applied research study was to investigate the extent to which online graduate students who participated in an early intervention differed from (1) a matched sample of students in the same course with the same faculty member at the same time and (2) students who were eligible for but declined to participate in the

early intervention. The outcome of interest was persistence approximately two years after the students became eligible for the intervention. A quantitative methodology and causal-comparative design were employed.

Participants

Students who submitted their first assignment in their first course on time and received a failing grade on that first assignment were eligible for participation. The Academic Advising team identified the students who met the criteria for the period from September 1, 2018 through December 31, 2018. Given that the goal was to identify students on the list who would benefit most from the current services offered by the university learning center, students who earned a failing grade because they did not submit the assignment or submitted it late were excluded. This list of students was sent to the learning center's coordinator, who made three attempts to contact each student by phone and email.

Thirty-nine online graduate students received a failing grade on their first assignment in their first course after submitting it on time in a four-month period, making them eligible for the early intervention. Ultimately, 22 (56.4%) of these students expressed interest in additional learning assistance, and the learning center coordinator recommended a tier of service at which they should start based on their unique needs (Tier 1: posted self-directed resources; Tier 2: live chat; and Tier 3: asynchronous or synchronous

one-on-one or group coaching). For additional details regarding these recommendations, see Lehan and Babcock (2020). These 22 students who expressed interest in additional learning assistance made up the Accept sample. The remaining 17 students who decided not to accept learning assistance were included in the Decline sample. Once the recruitment period ended, a request was sent to an external team member who had no knowledge of the study's purpose to create a Matched sample of students in the same course with the same faculty member at the same time as those students in the Accept sample, but these students did not fail their first assignment or visit the learning center. To examine the longer-term differences across the three samples, in September 2020 updated data were requested for all students in the Accept, Decline, and Matched samples.

Results

Table 1 shows the descriptive statistics associated with students in both the Accept and Decline samples who met the eligibility criteria for learning assistance services and includes students in the Matched sample. Compared to the Accept and Decline samples, the Matched sample tended to be more racially diverse and included more women, although these differences were not statistically significant. As reported in Lehan and Babcock (2020), the only significant differences across groups were related to age and time since obtaining the basis-for-admission degree. Specifically,

students in the Accept sample were significantly older than those in the Matched sample. In addition, the number of months since degree attainment was significantly lower for those in the Matched sample than those in the Accept and Decline samples. Table 2 shows the enrollment status of the three groups two years after the initial intervention.

Table 1
Descriptive Statistics for the Three Groups of Students

Sample	Age	Race	Gender
Accept Sample	$\bar{x}$ = 52.1 (SD = 11.7)	8 – Black/African American 6 – White 6 – Not Reported 2 – 2 or more races	11 – Female 6 – Male 5 – Not Reported
Decline Sample	$\bar{x}$ = 48.0 (SD = 12.4)	10 – Black/African American 4 – White 2 – Not Reported 1 – Hispanic/Latino	6 – Female 9 – Male 2 – Not Reported
Matched Sample	$\bar{x}$ = 41.4 (SD = 10.0)	6 - Black/African American 9 – White 2 – Hispanic/Latino 2 – Not Reported 1 – American Indian/Alaska Native 1 – Asian 1 – 2 or more races	17 – Female 4 – Male 1 – Not Reported

Table 2
Enrollment Status Two Years Later for the Three Groups of Students

	Active	Inactive
Accept Sample	10 (45.5%)	12 (54.5%)
Decline Sample	8 (47.1%)	9 (52.9%)
Matched Sample	11 (50%)	11 (50%)

In terms of changes in enrollment status from the short-term investigation in June 2019 to the longer-term investigation in September 2020, two students in the Decline sample changed from Active to Inactive. In the Accept sample, one student's status changed from Active to Inactive, whereas another student's status changed from Inactive to Active. In the Matched sample, one student's status changed from Active to Inactive, and three students' status changed from Inactive to Active.

Approximately two years after they completed their first assignment in their first course, it was found that three students in the Decline sample and three students in the Matched sample had participated in academic coaching outside of the early intervention. In the Decline sample, all three students participated in one coaching session each. Two of those three students were still actively enrolled at the institution at the two-year follow-up. In the Matched sample, the three students participated in one, five, and seven coaching sessions. The students who had five and seven coaching sessions were both still actively enrolled at the institution at follow-up, whereas the one student with one session was not. There was a notable trend that the students who sought academic support (from all three samples) on multiple occasions were still enrolled at the institution. Twenty-two students in the Accept sample agreed to participation in academic support. In the Accept

sample, the average number of sessions among the students who participated in academic coaching (Tier 3, n=10) was 4.71 (SD=4.19). Results of a Fisher's exact test showed that there was no statistically significant difference in the likelihood of being active approximately two years later across the three samples, $\chi^2(2) = 1.477$, $p = .48$.

Discussion

In the preliminary scan of the data, several trends were noted among the students who participated and declined participation in the early intervention. Consistent with the findings of Dauer and Absher (2015), students who accepted academic support tended to be older with more time in between earning a degree. In addition, more women accepted support, whereas more men declined it. This trend is consistent with the findings of previous research that men might be less likely to seek academic support than women (e.g., Brown et al., 2020; Huerta et al., 2017; Lin, 2016). Furthermore, although the matched sample of students was more racially diverse, slightly more Black/African American students declined academic support than accepted it. This trend is consistent with the previous finding that university students of color tend not to seek academic support, as doing so could be discrediting (Ciscell et al., 2016).

The primary purpose of this applied research study was to examine the extent to which online graduate students who participated in an early intervention differed in their persistence from (1) a matched sample of students in the same course with the

same faculty member at the same time and (2) students who were eligible for but declined to participate in the early intervention. Prior to the initiation of this study, it was found that 80% of students who failed their first assignment in their first course after submitting it on time were no longer active at the university 20 weeks later. Findings of a short-term investigation (Lehan & Babcock, 2020) showed that the attrition rate of the students who accepted the early intervention (48.7%) was significantly lower than the known institutional rate of 80%. In this longer-term investigation, findings showed that, two years later, the attrition rate of the students selected for the early intervention (46.2%) remained relatively unchanged. This finding might highlight the importance of early intervention in becoming a consistent support for students to persist at the university.

Additionally, as was reported in the previous short-term investigation (Lehan & Babcock, 2020), students who accepted academic support did not differ significantly from either students in the matched sample or students who declined support in terms of persistence. On the one hand, the finding that students who participated in the early intervention had a similar persistence rate to the general student population, even though the former failed their first assignment in their first course, is promising. At the same time, the finding that students who accepted and declined support had similar persistence rates calls into question the effectiveness of

the full early intervention, as the latter did not participate in academic coaching when it was offered. However, it is possible that the initial identification and outreach efforts had a positive effect on these students' persistence.

Overall, research investigating the relationship between academic coaching and program completion is varied in its results. However, research focused on students' understanding of academic support has shown that students value accessible and engaging information (Slater & Davies, 2020) to help to show them the value of academic support (Babcock et al., 2019). In this study, all 39 students who failed their first assignment in their first course after submitting it on time were supplied with information about academic support as part of the early intervention (Gordanier et al., 2018). Even though some students declined support at the time they became eligible for the intervention, they had knowledge of the academic support systems in place at the institution to assist them should they decide they needed assistance. Three of these students ultimately did utilize academic coaching services. These findings are consistent with those of Babcock et al. (2019) who found that students who understand academic support services may be more likely to use them when needed.

Researchers have found that increased usage of academic support services might not improve performance (Damgaard & Nielsen, 2018; Pugatch & Wilson, 2018; Gordanier et al., 2018) or

lead to higher program completion (Lehan et al., 2020). Nonetheless, institutional reports reflect that the proportion of students who stopped out or dropped out at 20 weeks later was 80%, which stemmed from students failing the first assignment in the first course. Therefore, the findings of this study show hopeful results, as almost half of the eligible students who took part in the intervention still remained two years later. These persistence rates were similar to those reported 20 weeks after the students were identified for the early intervention (Lehan & Babcock, 2020), with a notable exception. Specifically, the persistence rate of students who declined academic support decreased from 58.8% at 20 weeks to 47.1% two years later. It is possible that the persistence rate of this group of students will continue to decline over time, revealing significant differences between students who accept and those who decline academic support. Overall, the persistence of students in the acceptance for early intervention group over time was better than the persistence group who declined early intervention.

Implications for Practice and Research

The findings of this research have several internal and external implications, some of which this institution has begun to implement. The students who participated in the early intervention were indistinguishable from the matched sample of students in the same course with the same faculty member at the same time, despite their having failed their first assignment in their first course

after submitting it on time. Therefore, it seems that the intervention should be continued at the institution. Additionally, professionals at other institutions can follow a similar process to support students. That is, they can select an indicator of risk for drop out or use the same one employed in this study. Then, they can identify students with that indicator and engage in targeted outreach to encourage them to utilize academic support services at the institution. Importantly, they can track outcomes for these students and compare those who accepted and declined support as well as those who were eligible for the intervention and the general student population to promote continuous improvement. Both Yang et al. (2017) and Rockinson-Szapkiw et al. (2016) spoke to the importance of tracking online graduate persistence to identify specific institutional and integrative factors that may negatively impact online graduate student persistence. It is important to continue to investigate how student persistence and graduate retention rates could improve with academic support (Colver & Fry, 2016).

Overall, informing students who are at risk for drop out about the types of academic support available may create greater awareness of institutional resources as well as academic information that can be utilized when needed (Sneyers & De Witte, 2018). Whereas many of the students did not accept academic support the first time it was offered, letting students know about the resources available early in their program could be a first step in reducing the

stigma around support services being remedial and providing more inclusive academic support services (Babcock et al., 2019). Helping students to understand the support structures at the beginning of the program and having the personalized support of in-person outreach may help students to build a connection to the institution and/or support service personnel early in their program. Interventions that involve academic support may help students to build connections within the university that at-risk students who did not have access to an intervention lack.

The findings of this study also have implications for future research. The possibility that students who seek academic support early in their program may persist at a greater rate than those who do not seek assistance was one of the catalysts for this early intervention (Lehan & Babcock, 2020). The specific cohorts of students examined in this study can be tracked through program completion to assess if there are differences among the three groups in terms of completion rate as well as time to completion. Tracking students to program completion may provide more insight into whether or not these students will continue to use academic support services or if those who did not utilize services as often (or at all) will begin to use academic support. Furthermore, program completion data can be analyzed to determine if students who engaged in more academic coaching than their peers completed at a

higher and/or faster rate than those who did not engage in academic coaching or those who only completed one session.

Whereas this study tracked students who were eligible for an early intervention, it is still unclear what specific factors influenced them to accept or decline academic support. Moreover, it is not clear why some students utilized academic support numerous times and others attended only one session and did not return. Qualitative research with students who have attended multiple coaching sessions and those who have only attended coaching once might be warranted. Understanding these factors and the conditions under which academic support impacts persistence is paramount to improving services and targeting outreach efforts towards those students who are less likely to seek academic support themselves.

When looking at the early intervention point, it is important to evaluate whether the selected indicator of risk for drop out is still appropriate for identifying students who would benefit most from the intervention (Harackiewicz & Priniski, 2018). When the intervention point was initially selected in 2018, only 20% of students who failed the first assignment in the first course persisted beyond 20 weeks. A recommendation for research is to revisit institutional data to determine whether this percentage has stayed static or changed to understand if the first assignment is still a relevant intervention point for students at this institution. Attrition points at an institution can be fluid and change over time; therefore,

reviewing the data to see if the initial pain point still exists or has shifted is important when understanding persistence and institutional trends over time. If a new attrition point is discovered through analysis of institutional data, then replicating this study with the same three group types and a different intervention point is recommended.

Additional research surrounding academic coaching as a whole is needed to learn more about this type of academic support, as it is relatively new compared to the more established supports of tutoring and supplemental instruction (Osborne et al., 2019; Robinson, 2015). Understanding how academic coaching can influence program completion rates is crucial in advocating for the value of academic support, not just to students early in their program, but to all students (Lehan et al., 2020). It is important to continually assess different intervention points and different groups (e.g., students in the first course, students in the dissertation phase), utilizing academic coaching to ascertain if the intervention increases persistence for that specific group. Replicating this research at other institutions, both online and brick and mortar, with different intervention points would help add to the body of literature on academic coaching as an intervention for at-risk students.

Limitations

This study was not without limitations. First, the sample was relatively small. Second, this study was conducted at a single

institution; therefore, the results might not be generalizable to other learning centers. Nevertheless, they may provide guidance, information, or reference for other researchers seeking to initiate tracking early intervention opportunities among online graduate students. Third, all levels of academic coaching services within the learning center were not tracked. Although level 1 usage is not tracked, a future look at tracking the components of level 2 coaching chat services may provide additional insightful findings. Fourth, although a matched sample was included in the analyses, student pairs sometimes differed in demographic characteristics (e.g., sex/gender, race/ethnicity) when an exact match was not available. These and other factors might partially explain these findings.

Conclusion

Targeting students who are at higher risk for attrition, as this early intervention program did, offering an intervention, and then tracking students longitudinally can help to ascertain the longer-term effects of the intervention on persistence. Having a clearer picture of how academic support, specifically coaching, can promote student persistence may aid in resource allocation and continuous improvement efforts. Building upon the study by Lehan and Babcock (2020), this study represents a next step towards better understanding how academic coaching can support at-risk students and whether academic coaching can improve persistence rates over time. As was the case at 20 weeks after eligibility for the early

intervention was determined, students who accepted academic support were indistinguishable from those in a matched sample and those who declined support in terms of their persistence approximately two years later. Nevertheless, compared to the institutional benchmark indicating that 80% of students who earned a failing grade on their first assignment in their first course were no longer active 20 weeks later, the findings of this study are promising, as nearly 50% of students who were eligible for the intervention were still active two years later.

References

Akojie, P., Entrekin, F., Bacon, D., & Kanai, T. (2019). Qualitative meta-data analysis: Perceptions and experiences of online doctoral students. *American Journal of Qualitative Research*, *3*(1), 117-135. https://doi.org/10.29333/ajqr/5814

Babcock, A., Lehan, T., & Hussey, H. D. (2019). Mind the gaps: An online learning center's needs assessment. *The Learning Assistance Review, 24*(1), 27-58.

Brown, D., Barry, J. A., & Todd, B. K. (2020). Barriers to academic help-seeking: The relationship with gender-typed attitudes. *Journal of Further and Higher Education*, 1-16.

Budash, D., & Shaw, M. (2017). Persistence in an online master's degree program: Perceptions of students and faculty. *Online Journal of Distance Learning Administration, 20*(3). https://www.learntechlib.org/p/188480/

Burrus, S. W., Fiore, T. D., & Shaw, M. E. (2019). Predictors of online doctoral student success: A quantitative study. In M. N. Clay & M. B. Fanning, *Distance Learning Administration: Annual* (pp. 61-66). https://www.westga.edu/~distance/ojdla/winter224/burrusfioreshaw224.html

Ciscell, G., Foley, L., Luther, K., Howe, R., & Gjsedal, T. (2016). Barriers to accessing tutoring services among students who received a mid-semester warning. *The Learning Assistance Review*, *21*(2), 39-54.

Colver, M., & Fry, T. (2016). Evidence to support peer tutoring programs at the undergraduate level. *Journal of College Reading and Learning*, *46*(1), 16-41.

Damgaard, M. & Nielsen, H. (2018). Nudging in economics. *Economics of Education Review, 64*, 313-342.

Dauer, R. A., & Absher, B. (2015). The influence of student support programs upon the academic success of nontraditional students. *International Journal of Education*, *7*(4), 97-119.

Gayton, J. (2015). Comparing faculty and student perceptions regarding factors that affect student retention in online education. *The American Journal of Distance Education, 29*, 56-66. https://doi.org/10.1080/08923647.2015.994365

Greene, M. (2015). Come hell of high water: Doctoral students' perceptions on support services and persistence. *International Journal of Doctoral Studies, 10,* 501-518. http://ijds.org/Volume10/IJDSv10p501- 518Greene0597.pd

Gordanier, J., Hauk, W., & Sankaran, C. (2018). Early intervention in college classes and improved student outcomes. *Economic of Education Review, 72*, 23-29.

Hachey, A. C., Wladis, C. W., & Conway, K. M. (2014). Do prior online course outcomes provide more information than GPA alone in predicting subsequent online course grades and retention? An observational study at an urban community college. *Computers & Education*, *72*, 59-67. https://doi.org/10.1016/j.compedu.2013.10.012

Harackiewicz, J. M., & Priniski, S. J. (2018). Improving student outcomes in higher education: The science of targeted intervention. *Annual Review of Psychology, 69*, 409-435. https://doi/10.1146/annurev-psych-122216-011725

Huerta, M., Goodson, P., Beigi, M., & Chlup, D. (2017). Graduate students as academic writers: Writing anxiety, self-efficacy and emotional intelligence. *Higher Education Research & Development, 36*(4), 716-729. https://doi.org/10.1080/07294360.2016.1238881

LaPadula, M. (2003). A comprehensive look at online student support services for distance learners. *American Journal of Distance Education, 17*, 119-128.

Layne, M., Boston, W. E., & Ice, P. (2013). A longitudinal study of online learners: Shoppers, swirlers, stoppers, and succeeders as a function of demographic characteristics. *Online Journal of Distance Learning Administration, 16*(2), 1-12.

Lehan, T. J. & Babcock, A. (2020). Early intervention for struggling online graduate students: Processes and short-term outcomes. *The Learning Assistance Review, 25*(2), 111-132.

Lehan, T. J., Hussey, H. D., & Shriner, M. (2018). The influence of academic coaching on persistence in online graduate students. *Mentoring & Tutoring: Partnership in Learning*, *26*(3), 289-304. http://dx.doi.org.proxy1.ncu.edu/10.1080/13611267.2018.1511949

Lehan, T., Shriner, B., & Shriner, M. (2020). It's complicated: The relationship between participation in academic coaching and program completion in online graduate students. *Online Learning, 24*(3), 19-34. http://dx.doi.org/10.24059/olj.v24i3.2142

Lin, X. (2016). Barriers and challenges of female adult students enrolled in higher education: A literature review. *Higher Education Studies, 6*(2), 119-126. http://dx.doi.org/10.5539/hes.v6n2p119

Mintz, S. (2019, October 3). Why higher education will change: Innovation in higher education is not an option. It is essential. https://www.insidehighered.com/blogs/higher-ed-gamma/why-higher-education-will-change

Muljana, P. S., & Luo, T. (2019). Factors contributing to student retention in online learning and recommended strategies for improvement: A systematic literature review. *Journal of Information Technology Education Research, 18*(1), 19-57. https://doi.org/10.28945/4182

Osborne, J. D., Parlier, R., & Adams, T. (2019). Assessing impact of academic interventions through student perceptions of academic success. *Learning Assistance Review, 24*(1), 9-26.

Pugatch, T. & Wilson, N. (2018). Nudging study habits: A field experiment on peer tutoring in higher education. *Economics in Education*, *62*, 151-161.

Robinson, C. E. (2015). *Academic/success coaching: A description of an emerging field in higher education* (Doctoral dissertation). University of South Carolina, Columbia. Retrieved from ProQuest database.

Rockinson-Szapkiw, A. J. (2019). Toward understanding factors salient to doctoral students' persistence: The development and preliminary validation of the doctoral academic-family integration inventory. *International Journal of Doctoral Studies, 14*(1), 237-258.

Rockinson-Szapkiw, A. J., Spaulding, L. S., & Spaulding, M. T. (2016). Identifying significant integration and institutional factors that predict online doctoral persistence. *The Internet and Higher Education*, *31*, 101-112.

Roddy, C., Amiet, D. L., Chung, J., Holt, C., Shaw, L., McKenzie, S., … & Mundy, M. E. (2017). Applying best practice online learning, teaching, and support to intensive online environments: An integrative review. *Frontiers in Education*, *2*. https://doi.org/10.3389/feduc.2017.00059

Slater, D. R., & Davies, R. (2020). Student preferences for learning resources on a land-based postgraduate online degree program. *Online Learning, 24,* 140–161.

Smalley, A. (2020). Higher education responses to coronavirus (COVID-19). *National Conference of State Legislatures*. https://www.ncsl.org/research/education/higher-education-responses-to-coronavirus-covid-19.aspx

Sneyers, E., & De Witte, K. (2018). Interventions in higher education and their effect on student success: A meta-analysis. *Educational Review, 70*(2), 208-228. https://doi.org/10.1080/00131911.2017.1300874

Stevenson, T. (2013). Online student persistence: What matters is outside the classroom. *Journal of Applied Learning Technology*, *3*(1), 21-25.

Willging, P.A., & Johnson, S. D. (2009). Factors that influence students' decisions to drop out of online courses. *Journal of Asynchronous Learning Networks, 13*(3), 115-127.

Wladis, C., Conway, K. M., & Hachey, A. C. (2016). Assessing readiness for online education - Research models for identifying students at risk. *Online Learning*, *20*(3), 97-109.

Yang, D., Baldwin, S., & Snelson, C. (2017). Persistence factors revealed: Students' reflections on completing a fully online program. *Distance Education, 38*(1), 23-36.

Zahl, S. B. (2015). The impact of community for part-time doctoral students: How relationships in the academic department affect student persistence. *International Journal of Doctoral Studies*, *10*, 301-321. http://ijds.org/Volume10/IJDSv10p301-321Zahl0672.pdf