Effectiveness of a Virtual Option for a Limited-Residency Online Doctoral Program

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Abstract

With the growth of online doctoral programs, administrators are interested in determining the best programmatic structures to support student success. The structures of online doctoral programs vary widely. Some institutions require in-person or virtual residency experiences, while others can be completed entirely online without a synchronous residency requirement. The purpose of this quantitative, ex post facto study was to determine how attending a virtual in-residence affected the progression and completion of students' doctoral research. The study included an exploration of differences in progression between students who attended virtual, or in-person residencies, or a combination of the two to determine which programming resulted in the highest rates of student completion. This study found that on average students participating in a mix of in-person and virtual residency experiences finished their doctoral degree more quickly than student who attended exclusively in-person or exclusively virtual residency experiences. Future research should be conducted to see if these findings are generalizable to other institutions and also to determine if progression rates differ for students in programs that do not require synchronous, residential learning.

Introduction

An important part of many online doctoral programs is the in-person residency experience. In Spring 2020, concerns about the spread of COVID-19 forced many higher education institutions into an immediate transition to online delivery, including limited-residency doctoral programs. Thus, it is timely to consider the experience of one institution that has been offering a virtual option to online doctoral students who could not attend in-person residences since 2016.

In a previous study comparing on-campus and hybrid delivery in a doctoral program, the researcher found no significant difference in student outcomes based on students' GPA and comprehensive exam performance (Mu et al., 2014). Other researchers have identified student and faculty perspectives of on-campus experiences in limited-residency graduate programs (Hardin-Pierce et al., 2020; Yourous, 2020). However, there is little published research about the effectiveness of such in-residences, or whether virtual delivery of the face-to-face residency requirement results in different student outcomes.

The purpose of this quantitative ex post facto study was to determine how attending divergent formats of synchronous in-residences affected the progression and completion of online students' doctoral research. As such, the guiding research question was:

RQ1. What differences, if any, exist in doctoral research progression and milestone completion of students who attended in-person, virtual and a combination of in-person and virtual residency experiences?

Literature review

Blended and hybrid are both terms used to define learning in one or more delivery modes (McGee & Reis, 2012). Doctoral students require direct instruction to develop academic and professional competencies (Godskesen & Kobayashi, 2016). Online doctoral programs commonly supplement online course delivery with in-person orientations, residences, and other workshops to support competencies needed for learning to conduct independent research. Blended learning is pedagogically suitable for such courses, which may be less structured and tailored to teach aspects of research in graduate degree programs (Bower et al., 2015)

Bates (2019) defined a blended learning mode as any mix of technology with face-to-face instruction. Faculty and students interact in mixed delivery formats to accomplish pedagogically supported learning outcomes through teaching, learning, and assessment activities (McGee & Reis, 2012). Lakhal et al. (2017) identified four advantages and three challenges of implementing blended delivery in a graduate program. Advantages included: (a) flexibility and access, (b) quality of learning experience, (c) enhanced learning outcomes, and (d) institutional benefits; while challenges included: (a) course design, (b) student relationships, and (c) technology issues.

Implementing blended course delivery has been shown to reduce feelings of isolation of online students by allowing students to get to know each other more fully than when all instruction is conducted asynchronously (Cunningham, 2014). Students enrolled in blended, synchronous courses reported higher levels of social presence due to real-time, spontaneous, and dynamic communications (Bower et al., 2015; Cunningham, 2014). Increased program completion rates have been seen in research with Australian and Swedish college students, who have synchronous interactions with faculty and other students, as compared to those who only have asynchronous communication (Bower et al., 2014; Norberg, 2012). Blended learning can include both asynchronous and synchronous formats, including contexts where remote students participate in face-to-face classes by way of rich-media technologies such as video conferencing, web conferencing, and virtual worlds (Bower et al., 2015).

To ensure institutional viability, online doctoral-granting programs must monitor completion and time to completion data to promote student success (Shaw et al., 2015; Shaw et al., 2016). Online doctoral candidates present unique challenges including life constraints that hinder program completion (Yasmin, 2013). Researchers have explored reasons why students in doctoral programs do not complete their degrees. Reasons for attrition include issues with time mana management, personal constraints, and academic challenges (Zepke & Leach, 2010; Shaw et al, 2016). As such, institutions struggle to provide the most appropriate academic environments and interventions to help online doctoral students make continual progress and complete their doctoral research.

Doctoral programs should include administrative support for students failing to make adequate progress (Leijen et al., 2016). Online doctoral students often feel isolated and abandoned and so these supports should be tailored to promote collaboration and engagement (Erichsen et al., 2014). Doctoral students need direct instruction to develop academic and professional competencies (Godskesen & Kobayashi, 2016). In person or virtual intensive residencies or workshops may provide students with individualized instruction to support competencies needed for doctoral degree progression.

Background for the Study

The institution where this study was conducted offered four online doctoral programs – Psychology, Organizational Development and Leadership, Human Services, and Education, Students complete regular coursework in an asynchronous online format and attend independent research preparation sessions in three different synchronous 3-day In-Residence Workshops held at the school's campus.

In 2016, the school introduced 2-day virtual, synchronous In-Residence Workshops for students who could not attend the in-person sessions. These sessions were hosted on the Zoom platform to allow for synchronous engagement with faculty and students. Initial virtual Workshops were attended by only 10-20 students; however, they quickly grew to roughly the same size as the traditional in-person sessions that typically hosted approximately 50-100 students. Class sizes in the virtual sessions were limited to approximately 10 students, while in-person class sizes could be as large as 25-30 students.

Students originally had to show cause why they could not attend in-person sessions, and financial hardship was the most likely reason given for seeking virtual attendance. In 2018, the policy was changed to give students full choice whether to attend in-person or virtually. Students could attend either an in-person or virtual Workshop – there was no hybrid design for the same Workshop. The learning outcomes and curriculum for the two modalities are the same.

Methodology

Data were gathered for this ex post facto, quantitative study over three years.

The archival data included the following variables:

1. All Ground: Defined as only attending in-person residency experiences.
2. All Virtual: Defined as attending only virtual residency experiences.
3. Mixed: Defined as attending at least on in-person and one virtual residency experience.
4. Average Weeks (Wks) to LOI (Letter of Intent)/PJT (Project Justification Template): Defined as average number of weeks to obtain approval for the first doctoral research milestone after coursework.
5. Average Weeks (Wks) to Proposal: Defined as the average number of weeks to obtain approval for the doctoral research proposal after coursework.
6. Average Weeks (Wks) to Final: Defined as the average number of weeks to obtain approval for the doctoral research manuscript after coursework.

To determine whether a statistical effect between the three groups (in-person, virtual, mixed) occurred between the three dependent variables (weeks to the three doctoral milestones), a two-way ANOVA with replication was conducted in Excel.

Results

RQ1. What differences, if any, exist in doctoral research progression and milestone completion of students who attended in-person, virtual, and a combination of in-person and virtual residency experiences?

These results suggest that on average students participating in a mix of in-person or virtual residency experiences finished their doctoral degree more quickly than student who attended exclusively in-person or exclusively virtual residency experiences.

ANOVA: Two-Factor without Replication

	SUMMARY	Sum	Average	Variance
Columns	All Ground	141.50	47.17	861.51
	All Virtual	117.44	39.15	368.23
	Mixed	115.65	38.55	676.29
Row	Average of Wks to LOI/PJT	44.49	14.83	5.27
	Average of Wks to Proposal	142.80	47.60	61.18
	Average of Wks to Final	187.30	62.43	128.95

ANOVA

Source of Variation	SS	df	MS	F	P-value
Rows	138.96	2.00	69.48	1.10	0.42
Columns	3560.22	2.00	1780.11	28.27	0.00
Error	251.84	4.00	62.96		

Discussion and Conclusion

The results from this study support a comprehensive approach to programming aspects of limited in-residency online doctoral curricula. The findings reveal that residential components of the program may facilitate student progression toward completing their doctoral research. Specifically, increased faculty engagement with students through participation in virtual or blended intensive workshops may predict progression and promote student completion.

An assumption was made that student characteristics in all three populations studied – virtual, in-person, and mixed attendees – were similar. However, it is possible that the students who chose to attend virtual in-residences, and subsequently demonstrated quicker time to completion of their overall project, may be more autodidactic. The fact that they would prefer a virtual online environment to an in-person experience for their doctoral in-residency could be the result of being more comfortable in a more self-directed format. This idea supports Kasworm and Bowles's (2010) conclusions on the importance for doctoral students to master self-directed learning skills, as well as the importance of self-directed orientation in adult students (Khiat, 2017) and online learning (Cigdem & Ozturk, 2016).

Online doctoral program administrators may want to build upon this knowledge by expanding the use of virtual and online options for limited in-residency components of their programs. Overall, other online doctoral degree granting institutions should build on these results and what is demonstrated as best practices in online doctoral education to further facilitate student success. The next step for future research includes replicating this study in other limited in-residency online doctoral programs to ensure the findings are generalizable.

References

Bates, A. W. (2019). Teaching in a digital age: Guidelines for designing teaching and learning. Open BC Textbooks. https://opentextbc.ca/teachinginadigitalage/

Bower, M., Dalgarno, B., Kennedy, G. E., Lee, M. W., & Kenney, J. (2015). Design and implementation factors in blended synchronous learning environments: Outcomes from a cross-case analysis. *Computers & Education, 86*, 1-17. https://doi.org/10.1016/j.compedu.2015.03.006

Bower, M., Dalgarno, B., Kennedy, G. E., Lee, M. W., & Kenney, J. (2014). Patterns and principles for blended synchronous learning: Engaging remote and face-to-face learners in rich-media real-time collaborative activities. *Australasian Journal of Educational Technology, 30*(3), 261-272. https://doi.org/10.14742/ajet.1697

Cigdem, H. & Ozturk, M. (2016). Critical components of online learning readiness and their relationships with learner achievement. *Turkish Journal of Distance Education, 17*(2), article 8. http://www.openaccess.hacettepe.edu.tr:8080/xmlui/bitstream/handle/11655/20603/10.17718-tojde.09105-222609.pdf?sequence=2

Cunningham, U. (2014). Teaching the disembodied: Othering and activity systems in a blended synchronous learning situation. *International Review of Research in Open and Distance Learning*. *15*(6), 343-351. https://doi.org/10.19173/irrodl.v15i6.1793

Erichsen, E. A., Bolliger, D. U., & Halupa, C. (2014). Student satisfaction with graduate supervision in doctoral programs primarily delivered in distance education settings. *Studies in Higher Education, 39*(2), 321–338. https://doi.org/10.1080/03075079.2012.709496

Godskesen, M., & Kobayashi, S. (2016). Coaching doctoral students – A means to enhance progress and support self-organisation in doctoral education. *Studies in Continuing Education, 38*(2), 145-161. https://doi.org/10.1080/0158037X.2015.1055464

Hardin-Pierce, M., Hampton, D., Melander, S., Wheeler, K., Scott, L., Inman, D., Parrish, E., & Mudd-Martin, G. (2020). Faculty and student perspective of a graduate online delivery model supported by on-campus immersion. *Clinical Nurse Specialist, 34*(1), 23-29. https://doi.org/10.1097/NUR.0000000000000494

Kasworm, C., & Bowles, T. (2010) Doctoral students as adult learners. In Gardner, S. K. & Mendoza, P. (Eds.), *On becoming a scholar: Socialization and development in doctoral education* (pp. 223-242). Stylus Publishing.

http://library.smaratungga.web.id/repository/[Susan_K._Gardner,_Pilar_Mendoza,_Ann_E._Austin]_O(BookFi.org).pdf

Khiat, H. (2017). Academic performance and the practice of self-directed learning: The adult student perspective. *Journal of Further and Higher Education, 41*(1), 44-59. https://doi.org/10.1080/0309877X.2015.1062849

Lakhal, S., Bateman, D., & Saint-Lambert, J. B. (2017). Blended synchronous delivery mode in graduate programs: A literature review and its implementation in the master teacher program. *Collected Essays on Teaching and Learning, 10*(2017). https://doi.org/10.22329/celt.v10i0.4747

Leijen, Ä., Lepp, L., & Remmik, M. (2016). Why did I drop out? Former students' recollections about their study process and factors related to leaving the doctoral studies. *Studies in Continuing Education, 38*(2), 129. https://doi.org/10.1080/0158037X.2015.1055463

McGee, P. & Reis, A. (2012). Blended course design: A synthesis of best practices. *Journal of Asynchronous Learning Networks, 16*(4), 1-22. https://doi.org/10.24059/olj.v16i4.239

Mu, K., Coppard, B. M., Bracciano, A. G., & Bradberry, J. C. (2014). Comparison of on-campus and hybrid student outcomes in occupational therapy doctoral education. *American Journal of Occupational Therapy, 68*, 51-56. https://doi.org/10.5014/ajot.2014.685S02

Norberg, A. (2012). Blended learning and new education logistics in Northern Sweden. In D. G. Oblinger (Ed.), Game changers: Education and information technologies, 327–330. EDUCAUSE. https://www.educause.edu/-/media/files/library/2012/5/pub7203cs13-pdf.pdf?la=en&hash=073310091D7E8520F2C361335319F8877164147A

Shaw, M., Blyler, D., Bradley, J., Burrus, S. W. M., Rodriguez, R. (2015). The use of learning contracts to promote student success in online doctoral programs. *Online Journal of Distance Learning Administration*, *18*(3). http://www.westga.edu/~distance/ojdla/fall183/shaw_blyler_bradley_burrus_rodriguez183.html

Shaw, M., Burrus, S., & Ferguson, K. (2016). Factors that influence student attrition in online courses. *Online Journal of Distance Learning Administration, 19*(3). http://www.westga.edu/~distance/ojdla/fall193/shaw_burrus_ferguson193.html

Shaw, M., Throne, R., Fore, J., Duffy, J., & Clowes, M. (2015). Doctoral candidate milestone achievement: A philosophy for situated dissertation advising. *Eighth International eLearning and Innovative Pedagogies Conference, University of California Santa Cruz,* Santa Cruz, CA.

Yasmin, D. (2013). Application of the classification tree model in predicting learner dropout behaviour in open and distance learning. *Distance Education*, *34*(2), 218-231. http://www.tandfonline.com/doi/abs/10.1080/01587919.2013.793642

Yourous, K. E., (2020). Examining the role of on-campus experiences: A phenomenological study of persistence for limited-residency doctoral graduates. [Doctoral dissertation, Liberty University]. https://digitalcommons.liberty.edu/cgi/viewcontent.cgi?article=3471&context=doctoral

Zepke, N., & Leach, L. (2010). Improving student engagement: Ten proposals for action. *Active Learning in Higher Education, 11*(3), 167-177. http://journals.sagepub.com/doi/abs/10.1177/1469787410379680
