

Doctoral Students' Disposition Towards Research

Paula L. Smith, Anila Das, and Rabin Pathak

University of North Texas

Department of Learning Technologies, University of North Texas

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Tandra L. Tyler-Wood, Ph.D.

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Abstract

Achieving success in a doctoral program is a tumultuous task. Even though doctoral students are an elite group, some do not complete their studies. The research study examines doctoral students' disposition towards research in higher education. The doctoral students will be required to select a research topic and methodology, collect data, read and decipher textbooks, perform data analysis, and get organized (Burian et al., 2010). The Student Perception of Research Integration Questionnaire (SPRIQ) instrument for doctoral students was administered to cohorts 2024 and 2025 at the Learning Technologies (LTEC) doctoral program, 20 participants responded. The key findings a) indicated a low disposition in the motivation subscale b) 60% of participants indicated they frequently assimilated research findings c) 60% of participants stated they agreed that their learning was stimulated. It is recommended for future research to further expand on current dispositions and subscales mentioned in the current research study.

Keywords: doctoral students' dispositions, self-efficacy, perceptions, research process

Doctoral Students' Disposition Towards Research

Doctoral programs across universities require a certain level of competency to conduct research. However, most students do not complete the doctoral degree within the seven years in the United States, only 41% according to the Council of Graduate Schools, CGS (2008, Hwang et al., 2015). Therefore, many doctoral programs have sought to improve doctoral students' dispositions towards research. However, previous research studies have found that doctoral students' high levels of self-efficacy, perceptions, and disposition relate to successful outcomes in research. Therefore, studies galvanized into research to better comprehend why some doctoral students' disposition to succeed in research while others do not.

Previous research has shown that students' disposition towards research plays a significant role in their doctoral programs. Lamar et al.'s (2019) study results showed that doctoral students who believe one can engage in research; defined as research self-efficacy. The current study attempts to expand on that research and further evaluate students' disposition and challenges towards research in the Learning Design & Technology (LTEC) doctoral program. This study hypothesizes that students are more likely to complete the doctoral program if they have a high disposition towards their success factors (motivation, beliefs, current research, participation, academic disposition).

Literature Review

Doctoral Students' Disposition Towards Research

When entering a doctorate program, it is never an easy task. The doctoral student's disposition towards research will contribute to their success or failure in the program. Ph.D. programs consist of many individuals with academic experience. However, 40 to 50% of students do not complete the program (Lim et al., 2019; Hwang et al., 2015). Studies have shown

that distance learning (online) doctoral students are dropping out of their programs at rates 10 to 20% higher than students in traditional programs (Lim et al., 2019). The most compelling challenge is those doctoral students who drop out before the dissertation stage. According to Bowen & Rudenstine's (1992, as cited in Hwang et al., 2015) study, 20% of students do not complete the final stage of the program. Most doctorate programs set a high bar to achieve competency to excel in research. Doctorate students are seen as sources for research innovation and development and play a crucial role in generating knowledge (Sevim & Sarikaya, 2020).

The doctoral student's disposition towards research may be challenging for incoming students. Learning the research process could be overwhelming, especially for those without prior knowledge (Sevim & Sarikaya, 2020). The dissertation is one of the critical components to completing a doctoral program and involves a plethora of research. Most doctoral courses are linked to academic research and taught by instructors who are experienced in the research area (Visser-Wijnveen et al., 2015, p. 474).

Doctoral Students' Self-Efficacy Towards Research

The essential part of doctoral student preparation is developing research self-efficacy (Litson et al., 2021). According to Schwarzer (2014), self-efficacy is domain-specific. It means having various robust beliefs in different domains of functioning. For example, empathetic experience, lexical persuasion, sovereign experience, or mindful feedback can all be used to develop a sense of proficiency. Acting as a source of motivational adrenaline, "self-efficacy makes a difference in how people feel, think and act" (Schwarzer, 2014, pg. 10). Students that are confident and stress-free exhibit a stronger proclivity to be driven. Higher levels of self-efficacy mean enhancing motivation, but lower levels of self-efficacy could impede motivation in the doctoral student research efforts.

Self-efficacy enables doctorate students to advance, accomplish goals, and take on new challenges. Goals set too low or high do not contribute to the development of self-regulated learning or accomplishment beliefs. Training doctoral students for research allows them to pursue independent research and academic success (Litson et al., 2021).

Doctoral Students' Perceptions Towards Research

The doctoral students' perceptions of research could be naïve at first until one understands the entire process to complete the dissertation. The students have minimal or no idea what the research process entails Connell (1985, as cited in Green, 2017). One study with an exploratory qualitative design by Radda et al. (2012) conducted structured discussions of 500 doctoral learners from an online doctoral program with residency requirements. Some perceptions of the cognitive learning outcomes were research and writing skills, critical thinking, leadership, and others (Radda et al., 2012). These factors are what students believe they were learning at the current point of their doctoral program. However, the behavior learning outcomes included doctoral students' actions they believe were strengthened, like time management, perseverance, and interpersonal skills during the doctoral program (Radda et al., 2012).

Doctoral students' perception of coping with the many facets of life is varied. One of the most perceived outcomes in the Radda et al. (2012) study was increased emotional intelligence. Emotional intelligence is a global factor, as stated in Robati & Tonkaboni's (2017) study from Iran. Similar to Radda et al. (2012), the study results showed that self-control, perseverance, time management, stress toleration, and acceleration are necessary at the university doctoral-level Sari & Doganay (2009, as cited in Robati & Tonkaboni, 2017).

Doctoral Students' Challenges in Research

Doctoral students' challenges in research are not only happening in the United States but also abroad. Several studies alluded to the doctoral experience as special Kumar & Stracke (2007, as cited in Nurie, 2019). In the Nurie (2019) study done in Ethiopia, the most critical element of the doctoral program is writing the dissertation. The dissertation is viewed as having high standards in the teaching profession of higher education. There are challenges in this area as doctoral students have a communicative competence to address all research areas (Nurie, 2019). A doctoral student's disposition towards research with a higher level of self-efficacy could enhance the motivation factor for an excellent dissertation and completion of the doctoral program (Litson et al., 2021).

Another major challenge doctoral students face is curriculum problems in doctoral education. The study by Green (2017) refers to the curriculum as the "missing term" in higher education Barnett & Coates (2005, as cited in Green, 2017). As they enter the program, most doctoral students are assigned a graduate advisor or supervisor to help guide them through the program. However, there is no curriculum or set formula on how doctoral advisors or supervisors guide their students. Each doctoral student will be different and not be designed like undergraduate courses (Green, 2017). The study by Radda et al. (2012) discussed other challenges, especially for online or distance doctoral students balancing time between work, family, school, and other duties while giving adequate time to study and execute the research process (Radda et al., 2012).

Method

A questionnaire to measure doctoral students' disposition towards university courses was constructed. In addition, The Student Perception of Research Integration Questionnaire (SPRIQ)

from Visser-Wijnveen et al.'s (2015) study was conducted in which students' responses were petitioned, descriptive statistics were reviewed, and initial analysis was performed. The final questionnaire consisted of 24 questions from a 40 items list based on five points Likert scale. The subscale dispositions and related questions are listed in Table 1. A significant finding was in the comparison of mean scores by subscales. The average mean for subscale motivation was lower than all other subscales, indicating that motivation for doctoral students is low towards research.

Table 1 Subscales and related SPRIQ items

SubScales	SPRIQ Items
Beliefs	37, 38, 39, 40
Current research	11, 22, 30
Motivation	7, 14, 24
Participation	15
Reflection	1, 2, 6, 9
Research Integration	3, 4, 8, 19, 20, 26, 29, 32, 33

Participants

This study was conducted at a public research university within the Learning Technology (LTEC) program for doctoral students. For this study, the LTEC doctoral students in cohorts 2024 and 2025 were solicited for feedback on the questionnaire. The questionnaire was open for participation from both cohorts with no obligation or incentive to participate. No personal data was collected at any point in the questionnaire, and all data collected remained anonymous.

Materials

Data collection took form in the way of a survey questionnaire. The Student Perception of Research Integration Questionnaire (SPRIQ) from Visser-Wijnveen et al.'s (2015) ICLON Graduate School of Teaching, Leiden University, was used to assess doctoral students'

disposition towards research. The questionnaire was based upon the Likert Scale used to rate the questions on a five-point scale (rarely, very rarely, occasionally, frequently, very frequently), as shown in Table 2.

Table 2 Likert Scale Ratings and subscales

Scale	Agreement	Frequency
SubScale	<ul style="list-style-type: none"> • Beliefs 	<ul style="list-style-type: none"> • Current research • Motivation • Participation • Reflection • Research Integration
Five-Point Likert Rating Scale	<ul style="list-style-type: none"> • Strongly disagree • Disagree • Neither agree or disagree • Agree • Strongly agree 	<ul style="list-style-type: none"> • Rarely • Very rarely • Occasionally • Frequently • Very frequently

The data collection tool used to create, gather, and synthesize the data gathered from the questionnaire was survey monkey. Survey monkey was selected among other options for its familiarity, ease of use, and data analysis insights. In addition, the survey tool for the questionnaire constructed parameters to avoid duplication and only allowed one time to complete the survey by the same individual.

Inclusion and exclusion criteria

This research study's inclusion and exclusion criteria demonstrate doctoral students' data usages through a mixed-method approach. The inclusion criteria from the search were given to obtain relevant articles from credible sources. The exclusion criteria were given to eliminate any efforts to review and focus on the research, as listed in Table 3.

Table 3 Inclusion and exclusion criteria

Inclusion criteria will include	Exclusion criteria will include
Published in the last twelve years	Case studies

Peer-reviewed	Non-Peer-reviewed
Mixed method research design	Not published within twelve years
English	Not using a mixed-method

Procedures

A mixed-methods study was chosen as the study strategy for this research to allow for a more in-depth investigation of doctoral students' disposition: self-efficacy, perceptions, motivation, beliefs, and challenges. The SPRIQ instrument for doctoral students was sent via a Survey Monkey web link to the 2024 and 2025 cohorts enrolled in the LTEC doctoral graduate classes. In addition, the questionnaire was posted on slack, a platform utilized by students to communicate with one another, and emailed via Canvas inbox. Data was collected from the LTEC doctoral program cohorts 2024 and 2025 over a one-week time's span. A total of 20 doctoral students responded about students' disposition towards research among the 2024 and 2025 cohort participants. Data analysis was conducted through Statistical Package for the Social Sciences (SPSS) and Microsoft Excel data analysis tools. Therefore, limitations or problems in this study were unforeseen.

Instrument

The SPRIQ utilized in this research study was developed by Visser-Wijnveen et al. (2015). The SPRIQ consists of two constructs: research integration and beliefs about research integration. The subscales aligned with the vision of this study, which sought to measure the doctoral student's perception and disposition for research integration and beliefs within the LTEC doctoral program. The survey instrument measured various dispositions, such as doctoral students' self-efficacy, beliefs, and motivation.

Results

In Table 4, we present the Cronbach's alpha, the means, and the standard deviation of all subscales in a categorical format. The participation subscale showed a positive alpha compared to all other subscales, resulting in a negative alpha. All but one subscale were negative, indicating the internal consistency of each subscale to be poor. Means vary between .70 and 4.16 for each subscale. The findings from Table 4 infer that students' motivation levels were significantly lower compared to the other subscales. When asked about research findings, 60% of participants indicated they *frequently* assimilated research findings in their classes, as shown in Table 5. Table 6 results indicated that 50% of participants felt that the teachers *frequently* had sufficient time to support the participant during the learning process. Table 7, 60% of participants stated they *agreed* that their learning is stimulated when education is grounded in research.

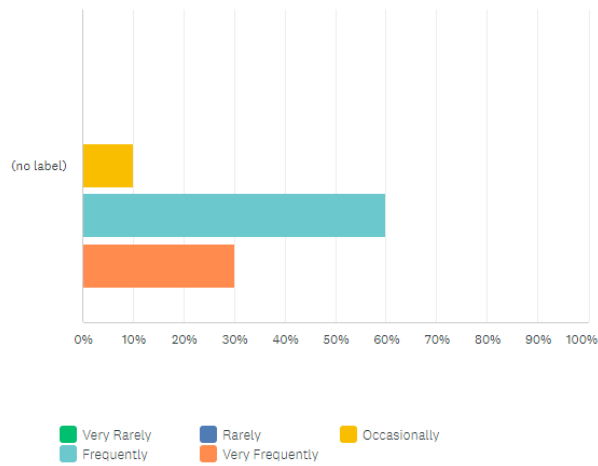
Table 4

Characteristics of the (sub)scales in the final questionnaire

(Sub)scale	N	Sample item	Mean	SD	Alpha
Research integration	20	Q19. <i>I became familiar with the results of scientific research</i>	3.87	0.95	-6.35
Reflection	20	Q 1. <i>I assimilated knowledge about research findings</i>	4.12	0.79	-3.57
Participation	20	Q 11. <i>My contribution to the research was valued</i>	3.87	3.75	1.00
Current research	20	Q 18. <i>Links to current research practices were made</i>	4.00	0.98	-2.65
Motivation	20	Q 15. <i>My interest in research in this area was increased</i>	0.70	0.90	-5.63
Beliefs	20	Q 24. <i>The research culture at the institute stimulates my learning process</i>	4.16	4.16	-2.62

Table 5

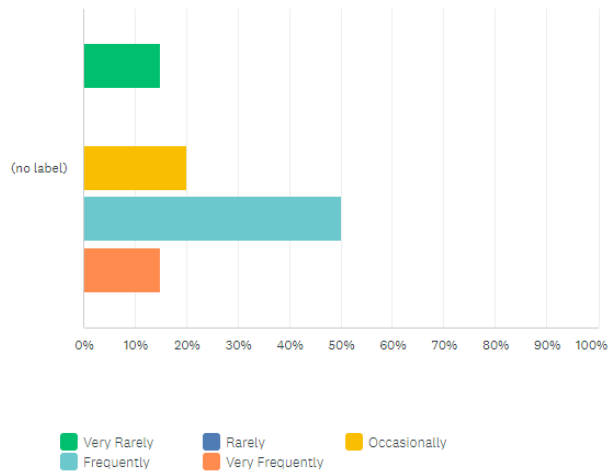
Question 1 Results (I assimilated knowledge about research findings)



	VERY RARELY	RARELY	OCCASIONALLY	FREQUENTLY	VERY FREQUENTLY	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	0.00% 0	10.00% 2	60.00% 12	30.00% 6	20	4.20

Table 6

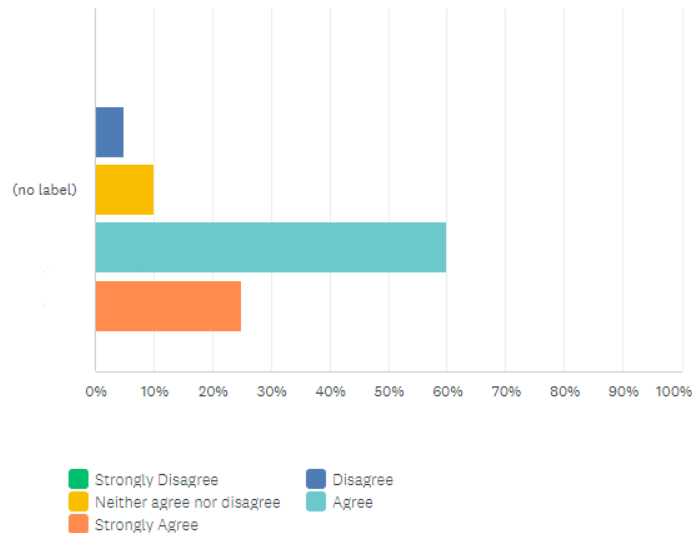
Question 20 Results (The teachers had sufficient time to support me in my learning process)



	VERY RARELY	RARELY	OCCASIONALLY	FREQUENTLY	VERY FREQUENTLY	TOTAL	WEIGHTED AVERAGE
(no label)	15.00% 3	0.00% 0	20.00% 4	50.00% 10	15.00% 3	20	3.50

Table 7

Question 21 Results (My learning is stimulated when education is grounded in research)



	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	5.00% 1	10.00% 2	60.00% 12	25.00% 5	20	4.05

Discussion

This research study aimed to assess doctoral students' dispositions towards research. The findings from this study indicated that doctoral students' dispositions towards research are low therefore supporting the prior research that stated 20% of students do not finish a doctoral program's final stage, according to Bowen and Rudenstine's (1992, as cited in Hwang et al., 2015).

In the article, Robati & Tonkaboni (2017) investigated the hidden experiences of doctoral students. The findings showed that the university's name recognition overshadowed the doctoral research course, lack of self-educating students, instructor's lack of time, and not enough research among the professors contributed to the challenges for the doctoral student. Another critical element is the graduate advisor or supervisor to facilitate the program's doctoral student research course and final dissertation (Robati & Tonkaboni, 2017).

The doctoral curriculum should be updated to remedy the inadequacies in research training (Osman, 2016). Previous research has shown that doctoral students' challenges in research consisted of working methods, domain-specific expertise, supervision, the academic community, and resources. More effective methods of strengthening students' skills to overcome hurdles encountered throughout their Ph.D. studies are necessary (Pyhalto, 2012). It was recommended that a small group learning approach should be used to teach students in research and supervise group research projects. This methodology would improve academic learning and skill acquisition while enhancing student interest in research, minimizing obstacles to student research, and making better use of limited resources (Osman, 2016).

Conclusion

With doctoral students on the rise with an increase of eight percent, increasing the student population from "2.8 million to 3.1 million" according to the National Center for Education Statistics (COE - Postbaccalaureate enrollment, 2021, para. 1), it is more crucial than ever to consider the underlying factors of why doctoral students are unsuccessful. This research study contributed to understanding doctoral dispositions towards research in the doctoral program. Success factors (motivation, beliefs, current research, participation, disposition) that contribute to high levels of self-efficacy proved the hypotheses to be true. Doctoral students with a high disposition towards research are more likely to complete their doctoral program successfully. Learning the research process could be overwhelming, especially for those without prior knowledge (Sevim & Sarikaya, 2020). However, training doctoral students for research allows them to pursue independent research and academic success. Therefore, it is recommended for future research to examine research within the doctoral curriculum.

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