Information Technology Doctoral Students Challenges with Completing Their Dissertations

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ABSTRACT

The problem that is addressed in this paper is that information technologies (IT) doctoral students are not receiving the proper guidance and feedback they need to complete their dissertations. The purpose of this qualitative observational case study was to investigate the types of challenges IT doctoral students encounter as they complete their dissertation. A qualitative observational research design was used to collect data for the study. The data was collected between the years 2014 to 2018. Ten participants were used for the study, which were five professors and five IT doctoral students. The researchers of the current study observed how professors supervised students in IT doctoral projects. The researchers observed students from three universities in the southern part of the United States. Purposeful sampling was used to recruit participants. Thematic data analysis was used to analyze the data. The findings suggest that the doctoral team is not well trained, do not communicate to doctoral students effectively, do not provide clear feedbacks, and do not use the dissertation checklist that is required by their school. The researchers provided some implications for practice and some conclusions.

1.0   Introduction

Dissertations are projects that are undertaken during doctoral studies in universities. Doctoral students are not always provided with proper guidance and directions as they complete a project of this magnitude. This can affect a university's bottom-line and future students' enrollment. When doctoral students do not complete their dissertation due to lack of substantial feedback from the dissertation team, they may quit the program or may be removed from the program as a result of poor performance. Due to lack of direction and commitment from their chair and committee members, doctoral students from different fields of studies, including information technologies (IT), find

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themselves working on their dissertation based on minimum feedback from their dissertation team, which include the students' chairs and committee members (Silinda&Brubacher, 2016).

1.1   Purpose statement

The purpose of this qualitative observational case study is to investigate the type of challenges IT doctoral students encounter as they complete their dissertation. Completing a dissertation is not easy, but proper guidelines and direction can facilitate a project of this magnitude.

1.2   Problem statement

The researchers of the current study observed students and professors on   different dissertations. One of the reoccurring problems that was observed is that doctoral students often do not finish their dissertation project for multiple reasons. Some of the reasons are personal in nature while others are based on errors that are made by their dissertation team. Regardless of the reasons, doctoral students are often penalized for not completing their project in a timely manner. When this becomes the case, doctoral students' projects are placed on hold because the department does not have enough professors who can chair the project. Sometimes the professors who are available often provide little feedback because they have other jobs and do not have enough time to provide substantial feedback.

2.0   Literature review

Obtaining doctoral degrees can be difficult and challenging for students (Borràs, 2017; Brown, 2016). When IT doctoral students fail to meet the milestone during a semester due to lack of guidance and understanding, they are often penalized and may be dropped from their program (Brown, 2016). This negative penalization from the department may yield negative reviews for the university, thus affecting future students' interest in the university or the program.

Choosing a dissertation topic in the field of IT can be difficult because IT-related topics are often associated with confidentiality, security, and regulatory rules. For instance, doctoral students whose dissertation topics   focus on IT usage, IT security, IT management,   IT governance, and cybersecurity may find it difficult to receive permission letters from the organizations they intend to use for their project. When doctoral students are successful in finding a researchable topic, they may find themselves at a stand-still because they may not be able to secure a permission letter from an IT organization in order to use their employees or data as part of their dissertation. This may be the case due to laws governing employees and customers' confidential information. If doctoral students are not able to obtain permission letters from organizations, they may not be able to move forward with their doctoral project.

Organizations may promise IT doctoral   students that   they would provide them with permission letters stating that they can use their staff and data as part of their study. However, when the time arrives for students to obtain such a letter, the organization may decide not to grant the permission letter at the last-minute leaving the student with little time to find another organization they can use for their study. The prospect of not knowing whether permission will be granted to use an organization as part of their project may discourage IT doctoral students from moving forward with their   doctoral project. Also, IT doctoral students who need permission to use a quantitative or qualitative instrument but find it difficult to secure such permission because they cannot locate the author (s) of the instrument may also be discouraged from finishing their dissertation.

IT Doctoral students may also be discouraged from working on their dissertation if they have a sick child who needs their attention, if they have a pregnant wife, or if they are pregnant and are unable to contribute to their project due to the symptoms of pregnancy, or if they have a medical condition that affects their day-to-day activity. Also, IT doctoral students may discontinue working on their project if they find it difficult to get along with their dissertation team and if they feel their dissertation team wants them to change their topic to a topic they are not interested in researching.

Additionally, some doctoral students may lose their jobs, get a divorce, lose a child or family members to death, take more responsibility at work, etc. As a   result of such challenges, doctoral students may be discouraged from finishing   their dissertation journey (Brown, 2016). While some problems may not impact doctoral students' abilities to work on their project, some may distract

students from achieving their dissertation milestones each week (Kivunja, 2016). For instance, an IT doctoral student who lost his or her job may spend time searching for another job and a doctoral student who lost a family member may need time to grieve and come to terms to the death of the loved one who died. Table 1 contain some list of problems dissertation students may face as they complete their dissertation.

Table 1:

Dissertation hindrance factors

1.	Pregnancy symptoms
2.	Sick child or parents
3.	Job responsibilities
4.	Marital conflict
5.	School responsibiltis
6.	Lack of guidance from dissertation team
7.	Not receiving approval letters from organizations or participants
8.	Lack of permission to use quantitative or qualitative instruments
9.	Not getting along with dissertation team
10.	Making changes to living arrangements

Borràs (2017) stated that all research contributes to the scientific community so that other researchers can expand on the research subject in greater depth. Starr and DeMartini (2015) noted that doctoral advisors need to implement realistic practices that will help their doctoral students graduate and succeed. Sometimes some of the directions that are provided to IT dissertation students from their chair and committee members are not clear while others lack clear examples of how students' finished dissertation should look. Because some IT related topics can be complex and difficult to understand, IT dissertation students find it difficult to choose a topic they can develop and eventually defend during the dissertation proposal and final defense stages.

Also, the doctoral student may find it difficult to overcome behaviors that reflect overcommitting, procrastination, and perfectionism (Montgomery, 2017). It is necessary that the student is proactive during the dissertation process. Due to opposing demands on time, many students do not always formulate and follow a work schedule, which can have implications for the quality of work that is produced (Thompson, Ballenger, & Templeton, 2018; Hands, 2018). In order to be successful in the end, students must devise a winning strategy.

2.1   Research Question

What type of challenges do IT doctoral students encounter as they complete their dissertation?

3.0   Methodology

A qualitative observational research design was used to collect data for the study. Ten participants were used for the study which were five professors and five IT doctoral students. Creswell (2014) stated that qualitative research methods require a smaller number of participants because qualitative data methods generate a greater volume of data, which must be then analyzed and described in detail. Therefore, ten participants seemed to be enough. The primary objective of a qualitative observational research is to define a specific problem at the beginning of a study (Creswell, 2014). Even though the researchers identified the problem in the beginning of the current study, they still wanted the events to unfold as freely as possible during the gathering of the data. By so doing, the researchers were better able to observe participants and identify patterns in behaviors. The data was collected between the years 2014 and 2018. The researchers of the current study observed how professors supervised students in IT doctoral projects. The researchers' role was to record the participants' interactions and behaviors objectively. During this process, the researchers suspended presumptions they may have held that would influence the research findings.

Additionally, the researchers observed students from three universities in the southern part of the United States. Purposeful sampling was used to recruit participants. The qualitative instrument

that was used to gather the data was an observation guide that was created by the researchers. A flyer about the study was emailed to ten professors at different universities. Among the ten professors who participated, only five agreed to participate with the IT doctoral students they were working with. A letter of consent was then drafted and sent to the professors and their students. The consent form explained the purpose of the study, how participants will benefit from the study, and how long the observation would last. Participants were informed that their participation in the study was voluntary. Participants were also informed that they may choose not to participate in this study at any time without penalty and that they have the right to inspect any instrument or materials related to the study. Also, participants were informed that any information that is obtained in connection with this study that can be identified with them will remain confidential and will be disclosed only with their permissions or as required by law.

The following criteria were used to select professors for the study. The professors had their IT doctorate degrees for at least five years, had three years' experience as IT dissertation chairs or committee members, and are familiar with general dissertation guidelines. The following criteria were used to select the students who participated in the study. All the participants had completed all their course work for the IT doctoral program and have been working on their doctoral project for one-year during the time of the study. The doctoral students who had not completed their course work or begun the dissertation project were not selected for the study. The professors and doctoral IT students were from different cultural backgrounds such as African American, Hispanic, Caucasian and Iranian. Most of the students who embarked on doctoral degrees were between the ages of 25 to 55 years old. Most of the students took time off their regular jobs in order to complete their dissertation within the time frame that was provided to them by their school.

3.1   Analysis

The researchers used NVivo software to analyze the observation data. NVivo is a software program that is used for qualitative analysis. The observation was transcribed verbatim. Then the transcripts were imported into NVivo software. NVivo was used to code the unstructured text and develop themes. The NVivo program allowed the researchers to use a method referred to as the constant comparison technique to arrive at themes. A thematic analysis involves the pinpointing and examining of patterns within a data set (Creswell, 2009).

The first step of the thematic analysis involved the researcher understanding the data. The researchers read through the data to identify information that did not pertain to the research questions. Such information was removed from the data. The second step of the analysis was to label the data. The researchers labeled sentences that were the same. Thus, the researchers were able to transcribe the information from the notes verbatim in the same manner as received. The third stage of the data analysis was recognizing common themes in the data. The fourth stage involved reviewing the themes. The researchers reviewed and reflected on the information that was collected by paying attention to impressions and tones that were revealed. In the fifth stage, the researchers named the themes. The researchers summarized all the themes that emerged and the categories they were placed in. For instance, the researchers summarized all the common themes and what they meant. In the sixth stage, the researchers weaved together the analytic narrative and verified some information collected with participants to ensure that they are documented correctly.

Additionally, validity in a qualitative study involves the trustworthiness of the data. For the data of a qualitative study to be considered reliable, a researcher must address issues that pertains to the data credibility, dependability, transferability and confirmability. Credibility was achieved in the current study through member-checking. During member-checking, the researchers checked the data to ensure that information is collected and transcribed appropriately. In some cases, participants were asked to clarify information that were unclear. To achieved dependability, the researchers provided detail information about the research procedure. To achieve confirmability, the researchers engaged in audit trail that provided a transparent description of the research process starting from the beginning of data collection process to the interpretation of the findings. To achieved transferability, the researchers ensure that detail information was provided so that other researchers could make an informed decision about generalizing the findings to other populations.

3.2   Findings

The findings suggested that some of the challenges IT doctoral students faced as they complete their dissertation is that their doctoral team was not well trained, did not communicate with them effectively, did not provide clear feedback and did not use the dissertation checklist that is required by their school.

4.   Discussions
4.1   Training

The findings suggest that dissertation chairs and committee members were not trained on how to direct and instruct IT doctoral students on their dissertation. The researchers observed: The dissertation team   were reviewing information from google on how to improve chapters on a dissertation. It appears the team did not know how to instruct students based on a guideline that is set by their school. This finding is consistent with Rapp, Moody, and Stewart (2018)'s study which suggested that doctoral students' dissertation teams and doctoral students need to be trained on how doctoral students would be successful in their academic pursuit. Simply having a general training course on how to provide instruction to students is not significant enough. Gokhale (2018) asserted, "the doctoral training has to be designed to cater for, the expectations of candidates as well as expectations and requirements of [professors]" (p.5). The dissertation team should be educated on how to utilize reasoning behavioral coaching, evidence‐based strategy that will lead to significant and long‐term behavioral change as it relates to completing the dissertation project. Muriisa (2015) stated that dissertation training programs are necessary for doctoral students and professors so that all will understand the dissertation process.

Additionally, the researchers observed: A dissertation team asked a student if the student remembered what they were taught regarding how to draft their problem statement. The team also asked the student to conduct research on how to draft a problem statement rather than explaining in their own words what the problem statement should entail. This finding is consistent with Richards et al.(2017)'s study which suggest that doctoral student advisors need to be trained on how to guide doctoral students through the doctoral journey. Committee members, as well as advisors, should provide guidelines during this initial stage of the dissertation.

Other researchers pointed out that most doctoral students begin their projects with over-ambitious topics and find it difficult to focus their initial research question (Clua-Losada, 2018). Educating dissertation teams on how students can develop a good research topic early on can have a positive impact on students' research. Other researchers noted that guidance for a dissertation topic selection should include the development of a clear statement of the research topic and solidification of the scope of the project, ensuring a topic is doable and ensuring a topic is researchable and not too broad (Richards et al., 2017; Li, Zhou, & Huang, 2018).

4.2   Communication

The findings also suggest that dissertation teams do not provide clear direction on how to adjust the dissertation. The researchers observed: the dissertation teams expected students to figure out what they wanted the students to do. Some of the students told their professors that they wanted them to explain what needed to be changed in the paper in standard English. This finding is consistent with Thompson, Ballenger, and Templeton (2018, p. 51) views which suggest "clear instructor to learner interaction is an important factor in increasing doctoral student performance in the online learning environment." Many dissertation projects have circling of ideas that were rejected earlier on in previous submission by a dissertation team member, but in another round of submission, such ideas may be suggested because a new dissertation team member may feel those ideas should be included in the doctoral project.

The researchers observed: The dissertation team did not communicate with each other effectively. In different occasions, committee members asked students to include information in their chapters that were already asked to be removed from their chapters by their chairs. This finding is consistent with Li, Zhou, and Huang (2018)'s study which suggested that if doctoral students are motivated and properly guided through their academic pursuit, they are more likely to be satisfied with the education and doctoral degree. The circling of ideas by dissertation chairs and committee members

can be viewed as a waste of time for the student. Wasted time and delays can lead to financial hardship for students when they are registered for the same dissertation class because they did not meet the milestones for the previous semester and thus are required to repeat a semester. Clear communication is needed for all who are involved in the dissertation process.

Furthermore, a dissertation chair may discuss with the student how the student can narrow a topic and draft a problem statement and purpose of the study statement. Because the problem that is addressed in a dissertation is the meat of the project, doctoral students need to have a good understanding of how to present the problem of their research topic in their project and then support it with academic references. Simply stating that there is problem based on communication with colleagues is not substantial. The problem of the dissertation section needs to have a detailed explanation and need to be backed up by peer-reviewed academic references.

4.3   Feedback

The findings also suggest dissertation chairs and committee members do not review students' dissertations gradually and carefully as they progress, and do not provide the needed recommendations. For instance, chair and committee members do not provide feedback on how students may need to introduce their topic in the introductory paragraphs and how to draft their purpose of the study statement.

The researchers observed: One of the committee members did not get back to a student for a month because she was not notified by the department that she was the student's chair. The student told her chair that she should have graduated last year but did not because the department have assigned her multiple dissertation chairs and committee members. Each time a new team is assigned to her, the team want her to make major adjustment to her topic. This finding is consistent with De Ramírez (2016)'s study which pointed out that direction on a research project needs to be clear and achievable so that students would be able to make adjustments to their project accordingly. Other research pointed out that students who are not clear on the directions that are provided by their chairs should be provided with a sample dissertation that their chair has directed so that students would have an idea of what their chair is asking of them (Jones, 2016). When students adjust their paper accordingly, but fail to implement the recommended feedback, chairs and committee members should provide an example of how they want the students to adjust their paper. Thompson, Ballenger, and Templeton (2018) observed that professors' interaction with doctoral students help students applied themselves to their doctoral classes and projects. The doctoral student dissertation team should be willing to step in and help when necessary at individual, relational, and institutional and departmental levels. Individual success often depends upon relational factors such as interaction.

4.4   Checklist

The findings also suggest that the dissertation teams did not use the dissertation checklist that is approved by the school. While every school has different dissertation checklist, a thorough dissertation checklist that is approved by a department would help dissertation students complete each section on their project. Simply using a dissertation checklist that is approved by another school from which the professor received his or her degree may not help a doctoral student meet the dissertation requirements of the school he or she attends.

The researchers observed: Some committee members told their students that the literature review section should be more than 60 pages. This information was different from their schools' dissertation checklists which states that chapter two needed to be 30 to 40 pages.

Research shows that the dissertation chair, committee member and student all need to understand each other when it comes to how a student's dissertation project sections should be organized (Li, Zhou, & Huang, 2018; Starr &DeMartini, 2015). Providing adequate feedback based on an institution dissertation checklist would enable a doctoral student to draft the dissertation according to his or her school standard, and at the same time, prepare the project for publication in the future. Figure 1 contains the key findings.
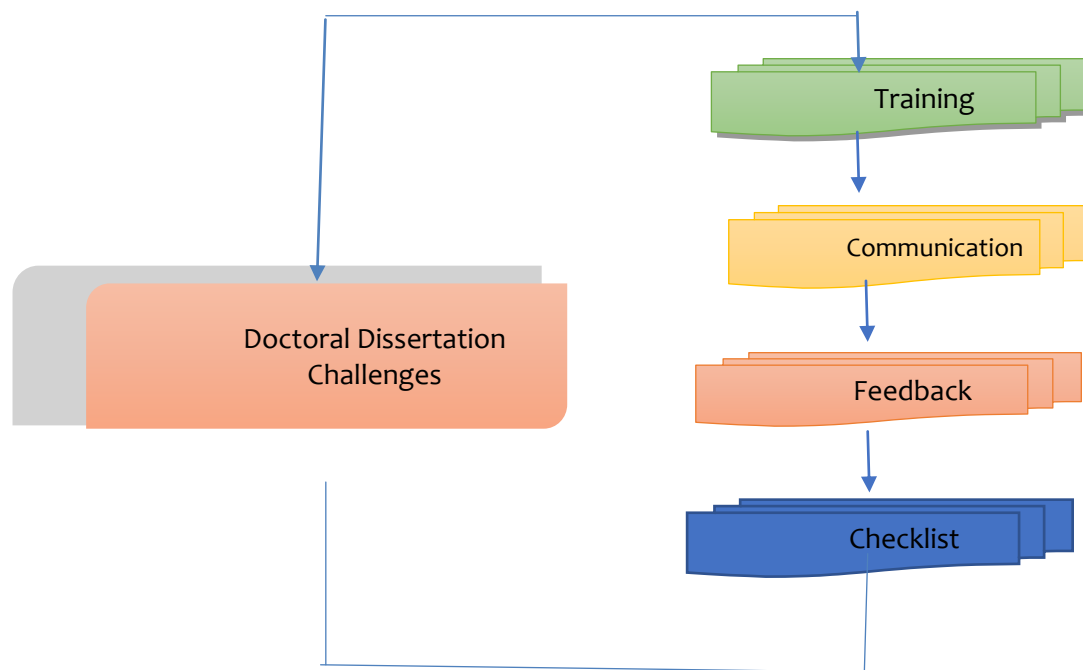
Figure 1. Key Findings

4.5   Implications for Practice

This study recommends four areas of implementation. First, if a department chair notices that IT doctoral students are not graduating in a timely manner as they ought to, the chair needs to get to the root cause of the matter by investigating the cause of the problem. It could be that the dissertation team is not trained in managing dissertations. If this is the case, training seminars on supervising dissertation projects need to be provided to the team. The seminars may be conducted every semester, or every month based on evidence-based practice. The chair needs to get to root of the problem and then resolve it so that it would not lead to low enrollment in the IT doctoral program.

Secondly, communication regarding doctoral project should be made on a weekly basis from the team to the doctoral students. By so doing, all will be on the same page and student would be provided with constant feedback on how to improve their work. In some cases, a problem may arise from the student. If this becomes the case, the department chair needs to have a one-on-one meeting with the students to see how he or she can help the student. If the student needs to take additional writing classes, such classes should be provided. However, if the student needs time off due to personal reasons, such request should be granted, and the chair should discuss with the student when the student would like to return to finish his or her dissertation.

Third, department heads need to ensure that IT students' dissertation teams fully understand the time-sensitivity of their work. the team that is involved in students' dissertations have jobs with other universities. As a result, they have little time to provide detail feedback on students' dissertation. In other cases, the dissertation teams may be out of town in the middle of a semester. When this become the case, they are not available to provide feedback.

Fourth, considering that dissertation teams review multiple dissertations during a semester, they need to be provided with an attractive compensation package so that the department would keep the same dissertation team for a long period of time. Also, instead of paying the team when a student completes a dissertation chapter or the whole dissertation, such teams need to be paid every month or every two weeks because the work they do require much of their time.

4.6   Further Recommendations

An IT dissertation student can be proactive by sitting in on mock dissertation defenses as well as final dissertation defenses. By so doing, the student would be able to have a visual understanding of what to do during his or her dissertation and what to expect from the faculties who are present during the defense. The doctoral teams also need to encourage doctoral students to practice defending their projects with committee members/advisors in order to become more effective at presenting their

dissertation topic. Doctoral students need to be prepared for the question-and-answer session that follows the presentation; they need to be primed to answer questions about their methodology; they need to defend and explain their choice of analysis; and they need to be able to discuss how their study contributes to the literature and informs theory; and where the research might go next (Chamberlin, 2004). Providing clear communication during dissertation feedback would help the student have a better understanding of what is expected of him or her.

Furthermore, Kunttu, Huttu, and Neuvo (2018) observed that doctoral students can be successful and motivated if their institutions collaborate with firms that would help them transfer their knowledge to the real world. Jacobs, Augustin, and Park (2018) stated that doctoral students are likely to have peace of mind and confidence when their institutions help them with job placement upon graduation. Cross (2014) observed that success in the dissertation journey is dependent on the effort of the dissertation team members. Additionally, Tribe and Tunariu (2016) observed that a dissertation needs to be well written so that it would be accepted for publication in an academic publishing journal.

Additionally, it is important to maintain firm boundaries around a dissertation writing time. It takes a considerable amount of time to complete the dissertation process. It is essential for dissertation teams to educate doctoral students on how to develop excellent time management skills in order to maximize the time students spend on their projects. Students may need to schedule their writing time around their family's schedule or another part-time job, which is perfectly legitimate. If this is the situation, the doctoral students need to consider waking up an hour or two earlier than usual or working late in the evening when they are alone (Louise, 2018). In order to manage time properly, the doctoral team should teach students how to set up small milestones and deadlines, track and reward progress, create outlines for individual chapters, and maintain a running "to do" list to ease getting in and out of the dissertation requirement. Hands (2018) noted that when students are taught how to apply themselves in research, they are better motivated to pursue a doctoral degree.

5.0   Summary

The purpose of this qualitative observational case study is to investigate the types of challenges IT doctoral students encounter as they complete their dissertation. A qualitative observational research design was used to collect data for the study, the data was collected between the years 2014 and 2018, and thematic data analysis was used to analyze the data. Ten participants were used for the study which were five professors and five IT doctoral students. The findings suggest that IT doctoral students' doctoral team is not well trained, do not communicate to them effectively, do not provide clear feedback and do not use the dissertation checklist that is required by their school. For doctoral students to be successful during their dissertation journey, they need to be supported by their dissertation team (Rapp, Moody, & Stewart, 2018; Starr &DeMartini, 2015). A dissertation is like a rolling-wave in that corrections will be made to it by doctoral students when a better understanding of the topic and subject is realized (Thompson, Ballenger, &Templeton, 2018; Hands, 2018). Dissertation chair and committee members need to keep in mind that a dissertation would not be perfectly written the moment the students begin working on it. Ingman (2014) observed that dissertation challenges have the potential to enhanced doctoral students learning capacity and ability to review and analyze literature carefully. Every dissertation student needs a team that will empower them to complete their project and obtain a doctoral degree.

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