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SOFT SKILLS IN THE CONTEXT OF DOCTORAL STUDIES: A REFLECTION BY DOCTORAL STUDENTS (Poster)

Abstract

Doctoral students need both hard skills and soft skills during their program of study. A qualitative study was conducted with doctoral students studying at one of the Canadian U15 universities. The findings presented in this poster are the experiential reflection of doctoral students. The participating doctoral students suggested that they need a variety of soft skills including communication, time management, conflict management, stress management, expectation management, work ethics, self-discipline, power navigation, self-motivation and other skills. This research aims to contribute to the growing body of literature in the context of soft skills with particular focus on doctoral students and the need for diverse soft skills in the context of their learning journey.

1. Introduction

Hard skills and soft skills are often discussed skills in literature (e.g., Balcar, 2016; Rao, 2018; Weber et al., 2009). Hard skills are primarily discipline-related technical skills and knowledge that help individuals to complete employment-related tasks (Dalaya et al., 2015; Balcar, 2016; Rao, 2018; Weber et al., 2009; Lyu & Liu, 2021). Soft skills are “the interpersonal, human, people or behavioral skills needed to apply technical skills and knowledge” in the context of employment (Weber et al., 2009 p. 354), and examples include time management, planning, ethics, flexibility, adaptability, (Dalaya et al., 2015), problem solving, conflict management, leadership, and critical thinking (Fakhretdinova et al., 2021). Soft skills are considered critical (Rao, 2018; Dalaya et al., 2015; Dogara et al., 2020) and Fakhretdinova et al. (2021) noted that students having “good level of technical and academic abilities” but lacking in soft skills (e.g., communication, teamwork) experience challenges (p. 483). Soft skills are considered important “for the promotion of deep knowledge and to foster academic success” (Sousa & Mouraz, 2014 p. 1539) and “success in doctoral programs and research careers is highly dependent” on such skills (Martins et al., 2021 p. 1).

Inspired by their personal experiential reflection in academia both as faculty members and doctoral students, the researchers conducted an exploratory qualitative study with doctoral students to identify a set of soft skills and gain insight into the importance of such skills in the context of their learning journey. This research aims to contribute to the growing body of

literature in the context of soft skills with particular focus on doctoral students and the need for diverse soft skills in the context of their learning journey.

2. Literature Review

The researchers conducted soft skills-related studies from different perspectives in the context of doctoral programs and students. For example: Chaló et al. (2023) interviewed “Ph.D. supervisors and directors” to identify skill development- and training-related issues in the context of doctoral programs (p.01); Andrade-Campos et al. (2023) reviewed “a novel Ph.D. training, both hard and soft skills development, through special intensive weeks, called Immersive Weeks” (p. 01); Garcia-Morante et al. (2024) interviewed doctoral program graduates working in non-academic sectors to gain insight into their perception related to training they received during their program of study; Candy (2019) examined doctoral students' expectation related to “work-based skills” training provided to them during their program of study (p. 413); González-Martínez et al. (2015) conducted research to identify specific skills including soft skills that doctoral students should gain during their program of study for employment purposes; Mantai & Marrone (2022) analyzed “PhD advertisements posted in 2016–2019” to identify specific traits required for entry into doctoral degree programs (p. 2273), and; Grote et al. (2021) evaluated the role of funding on the development of different types of skills such as research, communication, mentoring, teamwork and project management skills in students enrolled in specific STEM (Science, Technology, Engineering, and Mathematics) doctoral programs.

3. Methodology

An exploratory qualitative study was conducted with 11 doctoral students studying in areas such as computing science, dentistry, and education at one of the U15 Universities in Canada (<https://u15.ca/>). The study was approved by the institutional research ethics board. A video conferencing application (Archibald et al., 2019) was used for conducting semi-structured interviews (Kallio et al., 2016) with students and (auto) transcribing the interview data (Toda-Cosi et al., 2025). The participants were asked to reflect and share their experience on the use of soft skills during their program of study. A single coder was involved in coding and extracting quotes to detect and describe emerging trends and themes (Bogdan & Biklen, 1992; Miles & Huberman, 1998). This study has limitations such as single coder and number of participants.

4. Findings

The participants identified a number of “non-academic” skills (Finch et al., 2013 p. 684) that they considered were important during their doctoral program journey, and examples of such skills include:

Communication	Networking	Conflict Management
Power Navigation	Perseverance	Time management
Mentoring	Collaboration	Relationship Building
Empathy	Team management	Expectation Management
Work Ethics	Stress Management	Self- Discipline and Motivation

A few selected soft skills from the above table are included with quotes from the participants to highlight the relevance and importance of such skills during their program of study. Further quotes will be included in the poster presentation highlighting the significance of other soft skills.

Communication Skills: “When you are dealing with people, or are learning from people for a longer period of time, you need to have informal communication and formal communication ... [and] I think informal communication is also very critical”.

Stress Management: “I think most international students...they are away from home, they are in a new environment, they are in a culture shock and you know that stress...sometimes you have your supervisors [and they] have expectations of you, which perhaps you are not able to fulfill. So you know there is that certain level of stress that a doctoral student faces”.

Conflict Management: It “is extremely important and [one should know] how to communicate with your supervisors, and I think it goes both ways, not just for the students, but also for the supervisor...”

Power Navigation Skills: “That person [supervisor] has really complete power over whether you take the next step or not. So I felt the onus was on me to navigate the relationship very carefully.

Expectation Management: “It is important to sort of get a good sense of what your supervisor expects, and what you expect from them, and make sure that you're communicating appropriately...”

A number of identified soft skills, in this research, are often reflected in literature in various academic in the context of academia, particularly doctoral students and examples include motivation (Lindsay, 2015), communication skill, particularly presentation skills (Ohnishi & Ford, 2015; Leung et al., 2017), time management (Khozaei et al., 2015), stress management (Smith et al., 2006; Feizi et al., 2024) and networking (Schäfer, 2022).

5. Conclusion

This exploratory qualitative research identified a number of soft skills that doctoral students required at different stages of their program of study. The findings from this research will contribute to the growing body of existing literature on soft skills, particularly in the context of doctoral students and programs and informing program experts to develop strategies and create opportunities for doctoral students to hone relevant soft skills during their learning journey. The study has a number of limitations including number of participants. The researchers aim to expand this foundational work in multiple ways such as inviting doctoral students from other U15 Universities, and exploring doctoral program-specific “must have” soft skills.

6. References

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