



DOCTORAL SCHOOLS AS LEARNING ORGANIZATIONS: A POLISH PERSPECTIVE

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ABSTRACT

Aim/Purpose

The aim of this study is to analyze doctoral schools as a new form of doctoral education in Poland through the prism of the concept of a learning organization. This paper not only reshapes the landscape of doctoral education but also contributes profoundly to the field of organizational learning theory by examining how this new model can enhance educational environments. By demonstrating the transformative potential of doctoral schools as learning organizations, the author highlights their critical role in driving educational innovation and fostering a culture of continuous improvement within academia. Given the evolving legal and organizational environment and the increasing demands of universities and young researchers, this approach is crucial for the future success of doctoral education. Doctoral schools are undeniably positioned to adapt and thrive in this changing landscape, aligning with the core principles of learning organizations.

Background

A learning organization can rapidly adapt to changing conditions and boldly create transformative opportunities for improvement for all individuals associated with its functioning. In a learning organization, it is crucial to focus on the continuous acquisition of new skills, actively searching for opportunities, and boldly introducing innovative patterns of action. Equally important is receiving constructive feedback on mistakes made, learning how to avoid them, and, when they do occur, swiftly correcting them to foster ongoing improvement.

Methodology

This study explores the concept of doctoral schools as learning organizations, emphasizing their potential to drive educational innovation and foster a culture of continuous improvement within academia. The author employs qualitative methodology, analyzing literature, and has also incorporated autoethnography to address important aspects of managing a doctoral school relating to individual areas of a learning organization. The basis for the author's considerations is the theory of the 'learning organization' by Peter Senge.

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Contribution	The novelty of this article lies in its analysis of a relatively new form of doctoral education that has existed in Poland since the academic year 2019/2020 and is still evolving. The contribution also considers this form a learning organization, offering practical implications for policymakers and academic leaders. Furthermore, this study extends existing research on learning organizations by applying this theoretical framework to doctoral education, a field where such an approach has been underexplored. By integrating insights from organizational learning theory, the research provides a broader perspective on how doctoral schools can function as dynamic, adaptive institutions that foster academic development and institutional resilience. This research also fills a gap in the literature by demonstrating how learning organization principles can be systematically implemented in doctoral education.
Findings	Doctoral schools in Poland exemplify the characteristics of dynamic learning organizations. Their key features include learning from mistakes, continuously reviewing operational procedures, fostering the ongoing development of management staff, supervisors, and administrative personnel, taking calculated risks, actively searching for ways to enhance the quality and effectiveness of education, and making informed, evidence-based decisions. These aspects underscore the transformative potential of doctoral schools in shaping a more adaptable and innovative higher education system.
Recommendations for Practitioners	The doctoral school in Poland is such an innovative concept in relation to previous practices related to educating doctoral students that it requires structural and organizational changes and a shift in mindset among those responsible for training young researchers.
Recommendations for Researchers	Future research should investigate the extent to which doctoral schools perceive themselves as learning organizations and the degree to which they consciously implement this concept. Additionally, analyzing these institutions through alternative theoretical models and conducting empirical research would provide deeper insights into their evolving role in higher education.
Impact on Society	The findings of this study offer practical implications for doctoral school management. The analyses presented here can inform the development of strategies that align doctoral schools more closely with the principles of a learning organization, ultimately supporting their mission to cultivate a dynamic and progressive academic environment.
Future Research	Future research should further explore the extent to which doctoral schools identify as learning organizations and the degree to which they actively implement this concept. Additionally, investigating the specific challenges and strategies in integrating learning organization principles within doctoral education would provide deeper insights. Empirical studies comparing different models of doctoral education could also contribute to a more comprehensive understanding of how these institutions evolve and adapt in response to educational reforms. Furthermore, future studies could focus on identifying the key factors that influence the successful implementation of these principles, such as institutional culture, leadership styles, and faculty engagement. Exploring the potential barriers to adopting a learning organization approach within doctoral schools, including resistance to change or resource limitations, would also be valuable. This would encourage a more nuanced understanding of the complexities involved and inform strategies for overcoming these challenges.

Keywords doctoral school, PhD candidate, doctoral education, reform, learning organization

INTRODUCTION

Doctoral education is a rapidly evolving field where key elements of the higher education system intersect with the scientific research system. The changes occurring in the doctoral education model in Poland largely mirror trends observed in countries with extensive experience in preparing highly qualified research professionals while also being influenced by Polish academic traditions and other systemic solutions related to science and higher education (Kraśniewski & Lewicki, 2022). These changes highlight the complexities of doctoral education in Poland, where the expansion of doctoral programs has not necessarily translated into a higher completion rate. The gap between enrollment and graduation rates underscores deeper systemic issues that need to be addressed to improve doctoral education outcomes.

The massification of doctoral studies in Poland has not resulted in a corresponding increase in the number of doctoral degrees awarded. Although the number of doctoral students steadily rose in the 1990s and 2000s, the number of doctorates granted did not show the same trend. Many students enrolled in doctoral programs, but only a small percentage actually earned their degrees. Most either dropped out or completed the program without defending their dissertations. This gap between the number of enrollees and the number of doctorates awarded is crucial for understanding the emerging challenges in doctoral education within Poland (Kwiek, 2020).

A new approach to PhD education in Poland was introduced by the Act of July 20, 2018 – The Law on Higher Education and Science (Ustawa z dnia 20 lipca, 2018) – and was enforced in the 2019/2020 academic year. PhD education in a doctoral school is designed to prepare PhD candidates for a doctoral degree, primarily focusing on academic roles. It concludes with the submission of a doctoral dissertation. Doctoral schools have gradually replaced traditional doctoral programs, a transition that has been completed by the end of 2024. Unlike the previous model, where doctoral programs were managed by authorized units within institutions, doctoral schools are now operated by entire higher education institutions. These schools can be established by universities and scientific institutes, such as institutes of the Polish Academy of Sciences, research institutes, and international institutes.

Between 2019 and 2022, the number of PhD candidates in the new format steadily increased, driven by the intake of new cohorts. During this period, their numbers quadrupled, reaching 16,269 in 2023. In contrast, the number of PhD students following the ‘old’ format consistently declined, reflecting the ongoing phase-out of traditional doctoral programs (RAD-on. Doktoranci w szkołach doktorskich, 2023). The data available in the RAD-on system show that currently, there are 175 doctoral schools run in Poland (RAD-on. Szkoły doktorskie, 2025).

Since the 2019/2020 academic year, the organization of doctoral schools in Poland has been subject to evolutionary changes resulting from the experiences of the schools and the analysis of solutions adopted by other institutions, as evidenced by the constantly changing content of the internal legal acts of these schools (Kraśniewska & Pabjańczyk-Wlaziło, 2021). Among other things, from the point of view of continuous development, there has been an incentive to analyze doctoral schools as an example of learning organizations. The author’s role as the director of the doctoral school from 2021 to 2024 was significant in addressing the topic of analyzing the functioning of doctoral schools. This role facilitated an understanding of the operations of doctoral schools in Poland, including the challenges and difficulties encountered by both the institutions and their administrators. Conversely, assuming this role may introduce subjectivity from the researcher. This concern was mitigated through an auxiliary autoethnographic study, which enabled the researcher to uncover her unconscious assumptions, roles, viewpoints, and potential conflicts between the perspectives of a doctoral school

manager and a researcher. The author addresses the organizational culture of educational institutions. The recent study visit to the University of Patras in Greece focused on analyzing organizational culture and understanding the structure of doctoral education, was an additional motivation for preparing this text.

Doctoral education may appear to be a narrow and limited topic, but it holds immense significance for the future of universities and scientific research, the knowledge-based economy, and the global workforce in academia and science. As such, it is crucial that doctoral schools continuously evolve to meet the challenges of modern education. The concept of a learning organization may be an interesting proposal for implementation in doctoral schools, as it highlights internal relations and the issue of continuous improvement, which is expected by legal conditions related to the evaluation of the quality of education in doctoral schools (Rozporządzenie Ministra Edukacji i Nauki z dnia 27 września, 2021); Ustawa z dnia 20 lipca, 2018). Adopting the principles of a learning organization in doctoral schools can help meet regulatory requirements while fostering an environment supporting the growth of doctoral candidates and faculty. This model promotes continuous learning, collaboration, and the integration of feedback, making the educational system more adaptive and responsive. It enhances innovation and academic excellence, ultimately improving the quality of doctoral education and benefiting the academic community and the knowledge economy. These claims are discussed in the following text.

PHD EDUCATION IN POLAND – CHANGES AND CURRENT FORM

DOCTORAL STUDIES IN POLAND

Due to the Bologna Process, since the end of the 1990s, changes have been gradually introduced to the higher education system in Europe. The Bologna Process, leading to the creation of the European Higher Education Area (EHEA), as well as the Lisbon Strategy, aimed at building the European Research Area (ERA), has had a significant impact on doctoral education (Bitusikova, 2009a). In particular, these changes respond to several key challenges, including the evolving nature of the labor market in a globalized economy, as well as the European Union's common agenda in research and education, which aims to make Europe the world's most competitive knowledge-based economy (Bitusikova, 2009b).

One of the most important changes was the adoption of a study system based on two, and since 2001, on three main cycles. These include first-cycle studies, called bachelor's studies, second-cycle – master's studies, and third-cycle – doctoral studies were distinguished, which 'are not mass but elite in nature, and most countries are organizationally diverse' (Skinder, 2010, p. 23). In this context, individuals admitted to doctoral programs are typically referred to as 'doctoral candidates' rather than students. Depending on their circumstances, they may hold the legal status of students, employees, or a combination of both. Nonetheless, they are recognized as early-career researchers and should be granted appropriate rights, including access to healthcare, social security, and pension benefits. Universities and public institutions across Europe share the responsibility for defining the status and working conditions of doctoral candidates and young researchers (Bitusikova, 2009b).

As Kehm (2006) notes, in Europe, doctoral studies are carried out in various forms and sometimes have a different nature of education. In some countries, a separate type of doctorate, i.e., professional doctorate, indicates the professional profile of doctoral studies. Doctorates can also have an international form (Kola, 2017). In fact, diversity is a fundamental concept in the organization of doctoral education across Europe (Bitusikova, 2009b). The duration of education and the method of financing are different. In Europe, the time-to-degree for a PhD varies depending on the subject and the structure of doctoral education, whether in a program or traditional master-apprentice model. Doctoral degrees typically take longer in the humanities and shorter in medicine, engineering, and some natural sciences. Bologna reforms aim for a 3–4 year duration for a PhD, but some countries still

have two phases of doctoral training, increasing the average age of PhD graduates. The unstable financial situation of doctoral students, especially in European countries, has led to high dropout rates and a longer time required to finish this qualification stage successfully (Kehm, 2006).

Emerging models of research and doctoral education in the knowledge society are increasingly diverging from traditional approaches. There is a growing emphasis on structured programs that enhance transparency through ethical codes, regulations, and formal agreements defining the rights and responsibilities of doctoral candidates, supervisors, and institutions. At the same time, internationalization is gaining prominence, both in terms of mobility and the content of doctoral education. Governmental and institutional influence over research training is expanding, prioritizing societal, economic, and institutional relevance alongside competitive advantages. Additionally, interdisciplinary approaches are becoming more prevalent in doctoral programs, equipping candidates with essential skills for careers in diverse research environments beyond academia (Kehm, 2006).

Before the fall of communism in 1989, the primary purpose of doctoral education in Poland was to train highly skilled personnel for higher education institutions. Following 1989, doctoral programs expanded to include individuals seeking to continue their studies at the university level, not necessarily with the aim of pursuing academic careers. Following the Bologna Process, 'third-cycle students' gained access to benefits like scholarships and healthcare. The original focus on providing intensive research training for a small group of future academics shifted, breaking the traditional mentor-student relationship in most fields. While some elite research faculties in the sciences remain exceptions, Polish doctoral education has become massified, underfunded, and fragmented, with many students balancing doctoral studies with non-academic work instead of being integrated into the academic community (Kwiek, 2020).

During the extensive preparations between 2016 and 2018, doctoral education and doctoral degrees became central topics in public and academic discussions regarding the organizational and financial reforms in doctoral education. As noted by Mikołajczyk and Naskręcki (2017), the revitalization of the Polish doctoral education system has been significantly delayed compared to countries such as Germany, France, the Netherlands, and the United Kingdom, where reforms in doctoral training began many years ago. It is important to emphasize that previous efforts to improve the quality of doctoral degrees in Poland have unfortunately not yielded the expected results. According to Mikołajczyk and Naskręcki (2017), the doctoral education system should effectively integrate two models of researcher training: the master-apprentice model, which fosters solo researchers, and the Bologna model, which institutionalizes doctoral education on a larger scale, shaping so-called collective researchers. Diversifying the pathways to obtaining a doctoral degree should be a strength of this new system, making it more flexible while also intensifying research efforts and increasing the accountability of institutions overseeing doctoral schools. While the new doctoral education system should not abandon the Bologna model, it should place a much stronger emphasis on the doctoral candidate's research efforts.

The social changes that took place in Poland in parallel with the legal changes resulted in a significant increase in the number of doctoral students at Polish universities. However, despite the constant increase in the number of doctoral students, the number of defended doctoral dissertations did not increase, which was worrying (Kola, 2017). The shortcomings of the existing in Poland doctoral studies have been repeatedly raised in various publications, reports, and audit results, including those presenting the unequivocal opinions of people directly involved, i.e., doctoral students (Kierznowski, 2020). Following an in-depth review of the functioning of doctoral studies in Poland, which involved a comprehensive analysis of relevant data, reports, and scholarly sources, it was determined that the current system exhibits several significant shortcomings (Kierznowski, 2018). This analysis included a detailed examination of institutional structures, academic performance indicators, and feedback from stakeholders involved in doctoral education. The assessment was based on several criteria, including educational effectiveness, international cooperation, financial support for doctoral students, and the quality of doctoral dissertations. The shortcomings included: (a) the increasing similarity of doctoral

studies to higher education, but without external evaluation of the quality of education; (b) the massification of doctoral studies, especially in the social sciences and humanities; (c) the low effectiveness of doctoral studies (the number of people completing doctoral studies was eight times lower than the number of people who start such studies, Poland had the worst result among the 29 Organisation for Economic Co-operation and Development (OECD) countries for which such data is available); (d) the lack of adequate financial support for doctoral students (and the complexity and fragmentation of the existing financial support system), which forces them to take on additional work; (e) the low level of development of the academic labor market for doctoral students and young researchers; (f) the low level of internationalization of doctoral studies, which were less internationalized than master's studies; a common view in the academic community about the increasingly questionable quality of doctoral dissertations; and (h) problems in the implementation of interdisciplinary doctoral dissertations (Kierznowski, 2018).

The results of the Supreme Audit Office's inspection conducted in 2013-2014 also confirmed the aforementioned weaknesses and issues of doctoral studies. The inspection indicated that during the period covered by the audit, "doctoral studies were not a fully effective way of training scientific staff, and the conditions for conducting independent scientific research, collaborating in research teams, and publishing research results were not sufficiently motivating for obtaining a doctoral degree" (NIK, 2016). Therefore, the doctoral education system in Poland required a thorough reconstruction, which was carried out through the Act of 20 July 2018 - Law on Higher Education and Science (Ustawa z dnia 20 lipca, 2018).

A new model of doctoral education in doctoral schools was introduced starting in the academic year 2019/2020 as an element of the reform of the Polish higher education and science system and was created in place of the previously existing doctoral studies. The education of doctoral students in doctoral schools, starting from 1 October 2019, was accompanied by the gradual phasing out of doctoral studies. In the academic year 2018/2019, the last group of doctoral students began education in them. Based on an analysis of available statistical data, Kraśniewski and Lewicki (2022) identify key trends, noting that the increase in the number of doctoral candidates enrolled in doctoral schools up to 2023 is and will continue to be significantly smaller than the decline in participants of previous doctoral programs. Consequently, the overall number of doctoral candidates will decrease over the next few years until doctoral schools reach their full capacity, theoretically by 2023. At the same time, the proportion of international doctoral candidates is expected to increase gradually. Kraśniewski and Lewicki (2022) expect that by 2025, the number of doctoral candidates in Poland will stabilize at around 20,000.

DOCTORAL SCHOOLS AS A NEW FORM OF DOCTORAL EDUCATION IN POLAND

The doctoral education system in Poland is now structured around doctoral schools, which aim to enhance the quality of dissertations and strengthen the university's reputation and prestige (Sakowicz, 2023). Their establishment is intended to foster optimal conditions for doctoral candidates to conduct research and support their comprehensive development. Doctoral schools operate with a balance of autonomy and clearly defined responsibilities. The quality of research in Poland is directly linked to the quality of doctoral education and the institutions responsible for it (Mikołajczyk & Naskręcki, 2017).

A key objective of doctoral schools is to create an environment conducive to advanced research while facilitating international collaboration with universities abroad. This modern and efficient doctoral training system is expected to enhance the global competitiveness and recognition of Polish academia. Given that doctoral candidates play a crucial role in the research ecosystem, their education is essential for advancing scientific progress (Sakowicz, 2023).

In accordance with Article 198 of the Act of 20 July 2018 - Law on Higher Education and Science (Ustawa z dnia 20 lipca, 2018), doctoral education prepares students for obtaining a doctoral degree

and takes place at a doctoral school. A doctoral school, as outlined in the law, is an organized form of education in at least two scientific disciplines. Doctoral schools are to be horizontal structures operating within doctoral entities. The doctoral school formula supports interdisciplinarity in scientific research related to the dissertations prepared by doctoral students and the development of advanced transferable skills. The establishment of a doctoral school does not mean the creation of a new administrative institution, and the doctoral school run by a given entity is not an organizational unit separate from that entity. The authorization to create it results from a very high level of scientific research, confirmed by the parametric assessment of units (evaluation). Doctoral education lasts from 6 to 8 semesters. The doctoral student is appointed at least one supervisor within three months of starting the education. Education is conducted based on the education program and an individual research plan. The doctoral student, in consultation with the supervisor or supervisors, prepares an individual research plan containing, in particular, a schedule for the preparation of the doctoral dissertation and submits it to the entity running the doctoral school within 12 months of the date of commencement of education (Ustawa z dnia 20 lipca; see also, Zająć, 2021).

A certain novelty is the mid-term evaluation carried out in the middle of the education period with the participation of scientists from outside the entity running the school, while the evaluation results and their justification are public, and a negative result implies removal from the list of doctoral students. The quality of education at the doctoral school is also subject to external evaluation (the first evaluation of the schools will begin in the academic year 2024/2025), and its negative result will mean that it will not be possible to continue it (Ustawa z dnia 20 lipca, 2018). Gilbert (2004) outlines three levels of evaluation for doctoral education: (1) the level of the individual research project, where an external evaluation would focus on the achievement of the academic degree goals, and internal evaluation would assess whether the goals align with the expectations of stakeholders; (2) the level of the educational program, where external evaluation would aggregate data from the first level, and internal evaluation would examine the program's contribution to the development of doctoral students' skills; and (3) the university-wide level, concerning the impact of doctoral research on the development of knowledge and society, where external evaluation would be based on the university's objectives, and internal evaluation would consider the expectations of stakeholders. Gilbert (2004) suggests document analysis, research outcome reviews, surveys, and focus groups with doctoral students, academic staff, and stakeholders as evaluation methods. The Polish legislator has adopted the approach that the evaluation of doctoral schools should be institutional and expert in nature. The evaluation process follows a typical accreditation scheme: preparation of a self-assessment report by the doctoral school, the appointment of an evaluation team by the Chairperson of the National Accreditation Commission (KEN), an on-site visit by the evaluation team (including meetings and discussions with staff and doctoral students), the preparation of an evaluation report, submission of comments on the report by the evaluated institution, finalization of the report, and the issuance of the evaluation outcome (Lewicki, 2022).

Doctoral studies in Poland are funded by the public budget (included in ministerial subsidies for teaching) (Kwiek, 2020). Along with the introduction of doctoral schools, a universal scholarship system was also introduced – the previous fragmented and complicated system was replaced by a single, in principle, universal doctoral scholarship. Doctoral students without a doctoral degree receive a doctoral scholarship, the total duration of which cannot exceed four years. This period can be extended in the case of suspension of the doctoral student's education. In the case of a disability determination or its degree or a determination regarding professional and social rehabilitation and the employment of disabled individuals, the doctoral scholarship may be increased. The amount of the doctoral scholarship is regulated by law and should be no less than 37% of the professor's rate before and 57% after the mid-term evaluation (Sakowicz, 2023).

Typically, the doctoral school is headed by the Director of the doctoral school, the Head of the school, or the Dean, depending on the solution adopted by the university. The Director occupies a managerial role with a tenure of four years. The Director is often appointed by the Rector. Every

doctoral school possesses a Doctoral School Council, which serves a period of four years. The Council consists of representatives from all disciplines within a certain school, together with a representative of doctoral students appointed by the relevant governing body of the doctoral student organization at that school. The Doctoral School Council functions as an advising and consultative entity to the school Director.

As Mikołajczyk and Naskręcki (2017) stated, doctoral schools should be an effective organizational structure, serving mainly to support young scientists in their pursuit of scientific excellence. Their primary goal must be to create optimal conditions for doctoral students to conduct their own research at the highest level. Only the best candidates should have the opportunity to obtain a doctoral degree. Therefore, the conditions of recruitment and education should be oriented toward the best graduates of second-cycle studies and uniform master's studies and, consequently, towards the creation of doctoral dissertations at the highest scientific level. According to Article 200, admission to a doctoral school is open to individuals who hold a master's degree, a Master of Engineering degree, or an equivalent qualification, as well as those specified in Article 186 (Ustawa z dnia 20 lipca, 2018). The recruitment process is conducted through a competitive procedure based on the principles established by the Senate or the Scientific Council. Furthermore, the institution operating the doctoral school is required to publish these admission rules, along with the curriculum outlined in Article 201(3), no later than five months before the commencement of the recruitment process.

Zajac (2021), using the example of the Doctoral School at the Wrocław University of Economics, analyzed the recruitment principles and presented the assumptions and objectives of doctoral education at the Wrocław University of Economics Doctoral School. The recruitment process for the Doctoral School consists of three stages, each evaluated based on specific criteria. Candidates are assessed on their academic achievements, research potential, interview performance, Individual Research Plan (IPB), and publication record. The first stage involves evaluating the submitted Individual Research Plan, which is independently reviewed by two committee members specializing in the candidate's chosen discipline. The assessment considers the research objective and its novelty, the originality of the research project, methodology and coherence of argumentation, and a review of the current state of research with relevant bibliography. The second stage involves evaluating additional recruitment criteria beyond the interview. The committee also considers documented evidence of academic, social, and organizational activities, which are scored based on their relevance and duration. The third stage is an interview, which assesses the candidate's motivation, knowledge, and ability to articulate research ideas. This multi-stage recruitment process ensures a comprehensive assessment of candidates, balancing academic achievements, research potential, and engagement in scholarly activities to select the most promising doctoral students.

The transition from traditional doctoral programs to doctoral schools marks a significant shift in Poland's higher education system, with implications that extend beyond national borders. This change is part of broader educational reforms aimed at enhancing the quality of doctoral training, fostering innovation, and aligning with international standards. Doctoral schools provide a more structured, interdisciplinary, and collaborative environment, responding to the growing global demand for research-focused education that is adaptable to the evolving needs of academia and industry. This shift is critical not only for improving the overall quality of doctoral education in Poland but also for positioning the country more competitively in the international educational landscape. By embracing this transformation, Poland seeks to ensure that its doctoral schools remain relevant, rigorous, and capable of fostering research excellence on a global scale (Sakowicz, 2023).

The possibility of creating doctoral schools has existed in Poland for five years. Some universities treated the 2018 Act as an incentive for significant pro-quality changes, going beyond the scheme of previously conducted doctoral studies, adopting and gradually deepening new solutions and good practices drawn from international experience. Other universities tried to maintain the current educa-

tion model to the maximum extent, creating a single doctoral school within the scope of all the competencies held and adapting the solutions functioning within the previously conducted doctoral studies to the provisions of the new Act (Kraśniewski & Lewicki, 2022).

While defining the general principles for organizing doctoral education, the law has granted universities and other institutions authorized to train doctoral candidates considerable flexibility in shaping the structure of doctoral schools. As a result, there is significant diversity in structural arrangements and management models, driven by regulations adopted in the internal acts of institutions running doctoral schools, such as university statutes and doctoral school regulations (Jaworska & Pietrzykowski, 2020; Kraśniewska & Pabjańczyk-Wlazło, 2021). Different groups of universities may have varying approaches to doctoral education, depending on their mission, resources, and expectations regarding the labor market. Therefore, differences are likely to exist between polytechnic institutions and, for example, universities with a more humanistic focus. These differences may influence the interpretation of new regulations.

Divergences in the approach to doctoral education can impact the quality of doctoral programs. Universities adopting a more modern approach may focus on integrating interdisciplinarity, providing practical research experiences, and preparing doctoral candidates for careers both within academia and beyond, which could enhance their competitiveness in the job market. In contrast, universities adhering more closely to traditional models may concentrate on deep research specialization. However, both institutions operate within the same legal framework and define their organization. When it comes to monitoring and regulating this divergence, key roles are played by state authorities, which are responsible for creating the regulatory framework, as well as accreditation agencies, which assess the quality of education at universities. Their role is to ensure compliance with legal requirements while maintaining flexibility in implementing various educational models. Monitoring is carried out through qualitative assessments, audits, and accreditation processes. These findings require further analysis and conclusions at the national level to understand how different models of doctoral education impact the quality of doctoral education and the preparation of doctoral candidates for their future careers. The first evaluation of the quality of education in doctoral schools in Poland (Rozporządzenie Ministra Edukacji i Nauki z dnia 27 września, 2021), which began in the 2024/2025 academic year, may provide valuable insights.

Kraśniewski and Lewicki (2022) take a critical view of the current state of doctoral schools, acknowledging that while the introduction of these schools is a step in the right direction – aimed at addressing key shortcomings of previous doctoral programs, such as low efficiency and, in some cases, inadequate quality of education, and aligning Poland's doctoral training system more closely with global standards – the legal provisions governing them remain insufficient. Some quality-enhancing measures, aligned with the reform's objectives and the original intentions of the Ministry, as well as recommendations from an international panel of experts (Marklund et al., 2017), have yet to move beyond mere verbal commitments.

Only 9 of 114 institutions running doctoral schools are members of the European University Association Council for Doctoral Education (EUA CDE), an organization dedicated to developing new solutions and enhancing existing practices in doctoral education while providing various forms of support to universities in this area. Therefore, Kraśniewski and Lewicki (2022) predict that it is unlikely that Polish universities, in general, will actively monitor emerging European and global innovations and trends in doctoral education, analyze foreign universities' initiatives, and implement best practices in this regard, let alone play an active role in shaping these trends (Kraśniewski & Lewicki, 2022).

At the same time, the organization of doctoral schools is subject to evolutionary changes resulting from the experience of these schools and the analysis of solutions adopted by other institutions, as evidenced by the changing content of internal legal acts in relation to the original acts adopted in the first years after the education reconstruction (Kraśniewska & Pabjańczyk-Wlazło, 2021). The constant improvement by doctoral schools of existing solutions for educating doctoral students within

their framework and their autonomy encourages them to consider these institutions as learning organizations.

LITERATURE REVIEW

CHARACTERISTICS OF LEARNING ORGANIZATIONS

Organizational learning (OL) is a challenging concept to define, and the growing literature on the subject has generated considerable confusion (Inkpen & Crossan, 1995; Popper & Lipshitz, 2000). Some theorists argue that organizational learning is the sum of individual learning within an organization (Kim, 2009; Simon, 1991), while others view it as a collective phenomenon encompassing the ideas, processes, systems, and structures of the organization (March 1991). Lahteenmaki et al. (2001) emphasize that a critical aspect of organizational learning is, among other things, creating opportunities for individual learning for each person within the organization. Hedberg (1981) defines the differences between individual and organizational learning, stating that although organizational learning occurs through individual people, it would be a mistake to claim that organizational learning is nothing more than the cumulative results of the learning of the organization's members. Participants come and go, and leaders change, but organizational memory preserves certain behaviors, mental maps, norms, or values regardless of the passage of time.

According to Simon (1991), an organization learns in two ways: (a) by the learning of its members or (b) by incorporating new members who bring knowledge the organization previously lacked. The alternative perspective suggests that organizations do not have brains but have cognitive systems and memories that preserve specific behaviors, mental maps, norms, and values over time (Hedberg, 1981; Nonaka, 1994). Therefore, organizational systems and routines influence individual and group learning to achieve organizational goals (Inkpen & Crossan, 1995).

Several attempts have been made to design OL models, including classical models (Argyris, 2003; Argyris & Schon, 1978; Kim, 2009), the sociological model (Casey, 2005), the computational model (Deng & Tsacle, 2003), and the multifaceted model (Lipshitz et al., 2002), but a single comprehensive model remains elusive (Ponnuswamy & Manohar, 2016).

A learning organization (LO) is not just a concept linked to organizational learning (OL), but it also integrates insights from various fields like systems theory, cognitive science, and organizational development. The key difference between organizational learning and a learning organization is that the former emerges as a side effect of routine tasks, while the latter is a continuous process designed to encourage ongoing learning. (Ortenblad, 2001). The concept of a LO was formed based on the constant need to adapt the organization's management methods to changes in its market environment and the need to achieve a competitive advantage (Przybyla, 2003).

Senge (1990) examined the circumstances under which organizations acquire knowledge. Senge (1990) posits that successful businesses would be those that effectively harness employee engagement and learning opportunities across all management tiers. The capacity to consistently assimilate novel concepts and devise solutions that are suitable for the prevailing circumstances is crucial in this regard. Senge (1990) defines a learning organization as an environment that fosters new and growing thought patterns, facilitates the realization of common ambitions, and promotes continuous collaborative learning among individuals. The notion of a learning organization is founded on multiple assumptions. Organizations, akin to biological creatures, possess the capacity to learn, and this learning is a fundamental value. Secondly, as the success of a business relies on the contributions of all its employees, it is imperative that every employee engages in the learning process. Consequently, the company must establish settings conducive to staff growth, with a primary focus on collaborative learning, as shared knowledge facilitates the retention of learning outcomes. Third, the firm must effectively incentivize employees to engage in learning, develop and execute innovations, and contribute to the organization's future while acknowledging that individuals have diverse learning styles. The

learning process must be deliberate and ongoing rather than arbitrary and left to chance. The recognition of the execution of organizational learning processes and their management differentiates learning organizations from their predecessors.

Senge (1990) defined these conditions as “learning disciplines”, namely: (1) shared vision, (2) personal mastery, (3) team learning, (4) mental models, and (5) system thinking (Senge, 1990). They are shown in Figure 1.

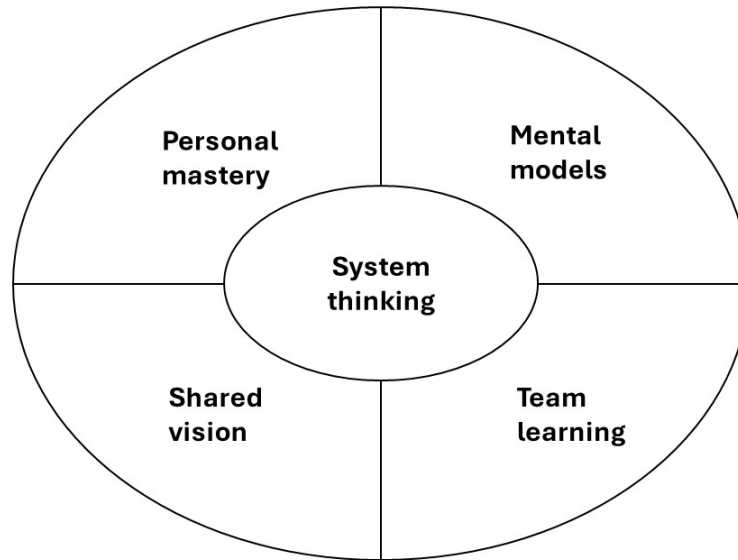


Figure 1. The five learning disciplines

PETER SENGE’S FIVE DISCIPLINES

The five disciplines model is the most widely recognized learning organization framework today and transcends the limitations of numerous other models (Park, 2008). This model offers many insights from the five pillars, which can improve the quality of work and outcomes when applied to managing an organization such as a university or school.

Shared vision

A distinguishing feature of a learning organization is having a shared vision. A shared vision is about building a common sense of purpose and direction within an organization. It involves creating a collective aspiration that motivates and guides the actions of all members. This discipline is crucial for aligning individual goals with organizational objectives (Oudejans et al., 2011). A shared vision of the future constitutes a framework of principles and a mission embraced by all members of the organization. Vision fosters innovative thinking and behavior, encourages risk-taking and experimentation, and facilitates long-term dedication. A collective vision motivates and fosters the pursuit of novel acts, hence facilitating learning and the acquisition of new experiences. Nonetheless, authentic motivation to attain established objectives necessitates the engagement of all individuals in their resolution, which should thereafter manifest as a commitment to actualizing the vision.

A fundamental prerequisite for involvement is the identification and articulation of the values that will steer everyday operations and decision-making, particularly under challenging circumstances. Leaders of learning companies must continually assess the present circumstances to progress toward the desired state. This entails the systematic evaluation of the corporate environment, employing instruments like SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) to pinpoint areas for enhancement and strategic prospects. Furthermore, the establishment of key performance indicators

(KPIs) is crucial for monitoring advancement towards intended results. These acts are especially pertinent to doctorate studies, as effective leadership in academic environments can cultivate a culture that promotes the growth of doctoral candidates and improves their capacity to acquire knowledge and skills. By establishing such environments, leaders can facilitate the flourishing and success of PhD students in their academic pursuits.

Personal mastery

Personal mastery is a process of continuous improvement of a specific way of perceiving reality, adapting it to changing environmental conditions. Personal mastery involves individuals continually clarifying and deepening their vision, focusing their energies, and developing patience. It encourages a commitment to lifelong learning and self-improvement, which is crucial for personal and organizational growth (Mattison, 2000; Oudejans et al., 2011).

Academic participants' constant learning, skill development, and ideation are key to a learning organization. Creative living characterizes personal mastery. Creating creative tension is key to personal mastery. This is what drives a person to bridge the gap between their vision of activities and their existing state, which they want to modify, improve, and perfect. Personal mastery requires generating personal visions, choosing what matters most, and watching changing reality. Senge (1990) suggests that a culture that promotes personal mastery should emphasize that personal growth is important and part of work. Personal mastery is often cited but simultaneously overlooked. It is a key element that requires more attention for an organization to truly become a learning organization (Reese, 2020).

Team learning

Team learning focuses on the process of aligning and developing the capacities of a team to create results its members truly desire. It builds on the discipline of personal mastery and shared vision, emphasizing dialogue and collective problem-solving (Oudejans et al., 2011). Team learning refers to enhancing the collective capacity of the group to acquire and consolidate knowledge. Everyone comprehends how to assist the endeavors of their peers. Collective intellect stimulates innovative and synchronized acts. Team learning can transpire in diverse contexts. The collaborative execution of everyday activities, resolution of current issues, development of novel solutions, discussion of concepts, and comprehension of colleagues' perspectives foster an environment conducive to learning within a team. Senge (1990) posits that collaborative learning presents greater challenges than individual learning.

Furthermore, the completion of tasks by a team does not necessarily equate to its learning. For teams to acquire knowledge and attain superior outcomes compared to solitary learning by individual members, appropriate internal organizational conditions are essential, with the quality of interpersonal interactions being especially significant. Team learning entails employing discussion as a routine communication method for resolving issues. This is supplemented with discourse, which seeks to facilitate communal decision-making.

Mental models

Mental models are deeply ingrained assumptions or generalizations that influence how we understand the world and take action. Senge emphasizes the importance of reflecting on and challenging these models to foster open-mindedness and adaptability within organizations (Bui & Baruch, 2010; Oudejans et al., 2011).

Recognizing mental models, or concealed assumptions and generalizations that affect the interpretation of phenomena, is crucial. This facilitates the identification of discrepancies and inaccuracies in world perception. Mental models, sometimes unspoken and imperceptible, can be profoundly harmful if their importance is undervalued, as they shape an individual's perception of reality and influence their behavior. If mental models remain unconscious, their validity goes unverified, perhaps leading

to entrapment in erroneous ideas due to the application of unsuitable or antiquated procedures. Consequently, erroneous assumptions result in misguided behaviors, potentially jeopardizing the entire corporate endeavor. Assumptions are regarded as facts and generalized without the diligence of seeing and contemplating distinct individual circumstances. Eliminating distortions that stem from adhering to specific paradigms necessitates revealing and illuminating them. The examination of mental models is facilitated by an inquisitive disposition, marked by receptiveness to diverse perspectives, adaptability in one's position when confronted with discrepancies, and the capacity to acknowledge limitations and shortcomings. This perspective also entails acknowledging the insights and experiences of coworkers. Engaging with mental models entails acknowledging them merely as a collection of assumptions rather than definitive truths and cultivating the ability to examine other perspectives while remaining receptive to comprehending others' cognitive frameworks.

System thinking

System thinking is a holistic approach to understanding complex problems and their interdependencies (Richmond, 1993). System thinking is the ability to see the bigger picture and understand the interrelationships between different components of an organization. It is considered the cornerstone of Senge's model, as it integrates the other four disciplines into a coherent body of theory and practice (Mak et al., 2020; Oudejans et al., 2011).

The primary premise of system thinking is the capacity to view the organization as an entirety while concurrently considering individual components and their interrelations. System thinking serves as the framework that interlinks the other pillars. System thinking facilitates the examination of all phenomena inside an organization and its surroundings over an extended temporal framework, seeing multidirectional, dynamic interactions rather than merely cause-and-effect linkages (Senge, 1990). Systems thinking constitutes a method of exploration and analysis. The failure to engage in systemic thinking leads individuals to neglect the interconnections between their actions and the behaviors of others.

It is, therefore, obvious that a learning organization is one that systematically adapts to change and continually transforms itself, creating conditions in which the learning of all its members is required and supported, focused not only on survival but actively creating its own future.

LEARNING DISABILITIES

Building on Argyris's work, Senge (1990) identified seven learning disabilities prevalent in most organizations and stem from archetypal behavioral patterns. These learning disabilities manifest at individual, group, and organizational levels, hindering personal and collective learning. When combined, they contribute to dysfunctional systems that obscure a holistic understanding of the organization.

Senge (1990) highlights seven learning obstacles in organizations to varying extents and can hinder their ability to evolve into effective learning organizations. These include: (1) "I am my position," which means identifying oneself solely with one's role; (2) "The enemy is out there," which means blaming external factors for problems; (3) "The illusion of taking care" which means the false sense of being in control; (4) "The fixation on events" which means overemphasis on reacting to events; (5) "The parable of the boiled frog" illustrating the danger of failing to notice gradual changes; (6) "The delusion of learning from experience" which means the mistaken belief that experience alone leads to learning; and (7) "The myth of the management team" which means that the myth that management teams function as cohesive units. The interpretation and application of these concepts in this paper are grounded in Senge's framework, which provides the foundation for understanding the dynamics of learning within organizations.

I am my position

The learning process can be hindered by employees identifying too closely with their positions. Senge (1990) emphasizes that individuals are often trained to show loyalty to their roles in a way that blurs

the line between their job and personal identity. When employees concentrate exclusively on their individual roles and responsibilities, it hinders the development of a learning process that includes accountability for collective performance. Individuals frequently focus their efforts on their specific roles, leading to a diminished sense of accountability for the overall results of the organization. This may result in individuals failing to fully comprehend the effects of their actions on the broader organizational system. This dysfunction may restrict individuals' receptiveness to novel concepts. In this state, individuals may exhibit apprehension towards novelty and change despite the potential for improvement associated with such changes. Consequently, individuals may safeguard their status and resources, isolating themselves from communication with peers and colleagues. They primarily prioritize individual benefit over the collective welfare or the interests of the group.

The enemy is out there

Another learning disability is the syndrome of 'the enemy is out there.' This refers to the tendency to blame external factors and individuals for problems rather than acknowledging one's own role in them. This issue is seen as a byproduct of the 'I am my position' mindset and non-systemic perspectives, but Senge (1990) points out that it extends beyond merely assigning blame within the organization. Blaming external 'enemies' hinders the effective implementation of a learning process, as it prevents a holistic approach to addressing emerging problems. Rather than accepting accountability for our actions, we tend to attribute blame to unknown 'others.' It is essential to recognize that these 'others' frequently constitute a component of the overall system. Therefore, Senge (1990) explains that this learning disability makes it nearly impossible to identify leverage points 'here' for issues that stretch across the boundary between us and the 'outside.'

The illusion of taking charge

The third learning disability, referred to as the illusion of taking control, is typically understood as addressing difficult problems without waiting for others to act or resolve issues before they escalate into major crises. According to Senge (1990), true proactivity is often confused with reactive behavior—waiting until a situation deteriorates before taking steps. What is often observed is not true proactivity but rather a form of concealed reactivity. Genuine proactivity arises from a comprehensive understanding of how individual actions contribute to issues. Individuals should prioritize addressing and eliminating the root causes of issues rather than simply enhancing responses to specific problems.

The fixation on events

People are trained to perceive life as a sequence of discrete events, each with a single, apparent cause (Senge, 1990, p. 21). However, Senge argues that the real causes of problems are too complex to be attributed to just one event. Despite this, organizations frequently segment their staff into units based on functional event series, leading to a limited understanding of the interconnected nature of various elements.

The parable of the boiled frog

The narrative of the boiling frog is as follows. When a frog is placed in a pot of boiling water, it will promptly attempt to escape. When placed in room-temperature water without disturbance, the frog will acclimate to its environment. When the pot is placed on a heat source, and the temperature is gradually increased, a notable phenomenon occurs. As the temperature increases from 22°C to 27°C, the frog exhibits no observable reaction and may appear to be content. As the temperature gradually increases, the frog becomes progressively disoriented and ultimately fails to escape the pot. Despite the absence of barriers to escape, the frog will remain in the pot and be subjected to cooking. This behavior can be explained by the frog's internal mechanism for detecting survival threats, which is calibrated to respond to sudden changes rather than gradual alterations (Bierema, 2003). Organizations encountering changing environments may experience a comparable trap. Organizations that do not actively monitor and assess gradual changes in their processes risk disorientation and failure to

adapt in a timely manner. Organizations must consistently measure and evaluate changes in processes, employing tools such as SWOT analyses or feedback loops. These measures enable organizations to identify minor changes in their environment and adapt their strategies, accordingly, preventing unexpected challenges.

The delusion of learning from experience

According to Senge (1990), the most powerful learning comes from direct experience. Individuals acquire practical knowledge through direct trial and error, engaging in actions, observing the outcomes, and subsequently adjusting their actions accordingly. Individuals possess a 'learning horizon,' defined as the temporal and spatial parameters within which they evaluate their efficacy. When actions yield consequences that surpass an individual's learning capacity, direct experiential learning becomes unattainable. This issue is described because people rarely truly understand the long-term results of their actions, even though we tend to believe that we can gauge the long-term outcome by looking at short-term results.

The myth of the management team

The last of the learning disability is the myth of the management team, wherein individuals sincerely believe that leadership can rectify any problems. Upon contemplation, it is evident that no individual manager has exhaustive knowledge of all processes or the requisite skills to address every issue. The management team comprises seasoned managers with many responsibilities and areas of competence within the firm. Their joint responsibility is to tackle intricate challenges vital to the organization's success.

Senge (1990) emphasizes that 'learning disabilities' do not stem from ignorance, lack of commitment, or limitations of people. They occur even in organizations where exceptionally intelligent, committed, and open individuals work. The issue lies in deeply ingrained belief systems, not ineffective practices. He also points out that these difficulties can be very dangerous for organizations if they are not properly identified. Therefore, it is crucial for organizations to recognize these barriers to learning and strive to become learning organizations (see also Retna, 2005).

APPLICATIONS AND CRITICAL ANALYSIS OF PETER SENGE'S LEARNING ORGANIZATION

Senge's concept of the learning organization has been influential but controversial. While it gained widespread popularity due to its compelling rhetorical vision (Jackson, 2000), its practical implementation has faced challenges. Some researchers have successfully applied Senge's (1990) five disciplines in organizational settings, demonstrating their potential for creating sustainable models of evaluation and improvement (Springmier et al., 2024). Senge's five disciplines have been applied in various organizational contexts, including education, healthcare, and corporate settings, to enhance learning and adaptability. For instance, in a rural high school, team learning was found to be the most prevalent discipline, significantly impacting teachers' perceptions of professional development (Stevens, 2019). Senge's disciplines have been applied in higher education to create learning organizations that can achieve competitive advantages. The framework helps universities operate more effectively by fostering interactions among the disciplines, such as shared vision and systems thinking, to enhance institutional performance (Bui & Baruch, 2010).

The integration of Senge's disciplines with cultural and spiritual ideals, such as the Chinese concept of harmony, demonstrates the adaptability of these principles across different cultural contexts. This approach highlights the potential for these disciplines to foster harmony within oneself, with others, and with nature (Mak et al., 2020). The transferability of Senge's disciplines across different cultural contexts has been explored, showing that cultural differences can influence the emphasis on specific disciplines. This suggests that while the framework is globally relevant, its application may need to be adapted to fit cultural nuances (Coldwell & Fried, 2012).

The concept of Senge (1990), although extremely popular, also has some limitations. A significant limitation is that different authors interpret five disciplines in various ways, leading to a lack of consistency and trust in the concept. This multiplicity of interpretations could threaten the very existence of the concept (Örtenblad, 2007). There is concern that organizations might adopt the terminology of learning organizations without implementing the underlying practices, leading to superficial changes rather than substantive transformation. Although Senge's learning organization may support responsible innovation, it lacks the requirement to engage external stakeholders in the innovation process. This limitation may hinder the full implementation of responsible innovation practices (Hansen et al., 2020).

Senge's framework may not adequately address the role of power structures within organizations, which can influence the effectiveness of learning initiatives. Caldwell (2012) notes that from the very beginning, the concept of the learning organization has been associated with a specific type of organization or new forms of organizational learning. However, it is often overlooked that Senge's formulation of the learning organization, based on 'systems thinking,' was inseparably tied to an attempt to transform the way of thinking about change agency and leadership in organizations. In this context, Caldwell (2012) argues that Senge's learning organization can be re-conceptualized as a partial fusion of 'systems thinking' and learning theories, leading to a conception of organizational learning as a form of 'distributed leadership.' However, Senge's concept is critically flawed because it fails to theorize the organizational practices through which leadership learning and leading to learning are shared or distributed within organizations. Caldwell (2012) concludes that Senge's insufficient focus on distributed leadership consistently neglects issues of practice and power. As a result, his work does not provide an exploration of the possibilities for increasing the dispersion of human agency, power, knowledge, and autonomy in the workplace.

While the five disciplines provide a robust framework, challenges remain in integrating them consistently across different organizational levels and contexts. For example, systems thinking and mental models often show lower internal consistency, indicating a need for further development and refinement (Oudejans et al., 2011). Critics argue that Senge's theory is fundamentally flawed, displacing the concept of learning and offering weak responses to pressing global issues (Hsu & Lamb, 2020).

Future research is suggested to explore the integration of knowledge management and the role of technology in enhancing learning within organizations. Additionally, strategic leadership is identified as a critical factor in fostering a learning environment (Hutasuhut et al., 2021).

These critiques indicate that although Senge's five disciplines provide valuable insights, their application necessitates careful consideration of organizational context and a balanced approach to the principles involved. The critiques underscore the necessity for a more nuanced application of Senge's framework, considering the complexities inherent in organizational culture.

UNIVERSITY AS A LEARNING ORGANIZATION

A university as an organization has features typical of all organizations and features resulting from its specific nature, which is defined by the law on awarding academic degrees and combining didactic functions (educating the most qualified professional staff and academics) with scientific functions (conducting research). Higher education institutions (HEIs) serve as the cornerstone for enhancing a nation's intellectual capacity, as they are places where knowledge is both generated and applied. They also foster various learning practices aimed at updating individuals' skills and expertise. However, today's HEIs, like all institutions, operate within a rapidly changing and unpredictable environment, requiring them to quickly adjust and respond to external shifts (Levine, 2000; Middlehurst & Woodfield, 2007).

Given the dynamic nature of change, an organic organizational structure should adapt to the evolving demands of the environment, which is seen as an urgent need for HEIs. However, the findings of

White and Weathersby (2005) suggest that universities are seldom recognized as learning organizations. Furthermore, it is argued that for these institutions to truly become learning organizations, they must cultivate the right culture, administration, and leadership.

Bui and Baruch (2012) introduced and explored a framework for learning organizations in higher education, considering an international perspective. Drawing on a sample of 687 employees from the UK and Vietnam, researchers examined how personal mastery, mental models, team learning, shared visions, and systems thinking relate to their antecedents and outcomes. Results lend support to the proposed model of learning organizations. As anticipated, these five factors partially mediate the connection between the antecedents and outcomes. Additionally, Bui and Baruch (2012) discovered that employees from collectivist cultures showed a greater commitment to becoming learning organizations compared to those from individualistic cultures.

Örtenblad and Koris (2014) stated that many researchers have recently shown interest in whether HEIs are already learning organizations, and if not, whether universities should become learning organizations, and if so, how to become learning organizations. The cited authors conducted a literature review of 73 works on the importance of the idea of a learning organization for HEIs and systematically analyzed them from different stakeholder perspectives, i.e., managerial, employee, and societal perspectives. Based on the analysis, it was concluded that the idea of a learning organization should not be uncritically accepted by HEIs, nor should it be uncritically rejected. This means that higher education institutions should carefully evaluate the concept of a learning organization, considering both its potential benefits and challenges, before making an informed decision about its implementation.

Doctoral schools, as mentioned above, have been run in Poland for several years by academic universities that meet high scientific standards. A doctoral school is a unit within a university that has a certain autonomy and educates in at least two disciplines. A doctoral school is characterized by a high complexity of social relations and susceptibility to environmental influences. It seems reasonable to talk about it as a learning organization. Further considerations will therefore focus on answering the question of whether doctoral schools in Poland, considering their mode of operation, can be considered learning organizations.

METHOD

The aim of the analysis was to explain the specifics of the functioning of doctoral schools in Poland through the prism of a learning organization. As a convenient methodological scheme, the well-known concept of Senge (1990) was adopted, who distinguished the so-called five disciplines of a learning organization. The analysis, therefore, focuses on five key disciplines: (1) shared vision, (2) personal mastery, (3) team learning, (4) mental models and (5) systems thinking. The main aim was to use the five-discipline model to understand to what extent each of the disciplines applies to the doctoral school and its functioning.

The analytical process carried out consisted of the following stages: (1) identification of key assumptions resulting from each of the five disciplines (which were presented in the section containing the literature review), (2) comparison of the theoretical framework of the model with the functioning of doctoral schools in Poland, (3) reflection on how the five-discipline model can be applied to the analysis of the functioning of doctoral schools, whether and to what extent characteristic features of them are visible. In addition, Senge (1990) identifies seven learning difficulties that occur in all organizations to varying degrees and that can prevent them from achieving success as learning organizations. These difficulties were also analyzed in relation to the functioning of doctoral schools in Poland.

The research employed a deductive approach, utilizing the learning organization theory as an analytical framework to evaluate the operations of the doctoral school organization. This study lacks empirical analysis and instead emphasizes the interpretation and application of Senge's theory to evaluate the operation of doctoral schools in Poland, which represent an innovative organizational approach in doctoral education. This study employs a qualitative approach, facilitating a comprehensive analysis of the phenomena and processes present in the examined reality.

The employed methodology is grounded in autoethnographic research (Adams et al., 2016), wherein the researcher examines their personal experiences within the framework of wider social and organizational phenomena. This method enhances comprehension of the dynamics associated with organizational learning and doctoral education, considering the subjective viewpoints and experiences of the researcher while reducing the potential for bias. Autoethnography facilitates the amalgamation of theory and practical experience, enhancing the analysis and leading to the revelation of significant insights. Data analysis depends on methodologies for deriving findings from the researcher's experiences and existing literary sources, alongside their engagement with scientific ideas pertinent to learning organizations and doctorate education. In composing an autobiography, the author contemplates and selectively narrates prior experiences. These experiences are not typically lived with the sole intention of documenting them; instead, they are compiled with the benefit of hindsight (Ellis et al., 2011).

This methodology facilitates a comprehensive knowledge of the issues encountered by doctoral schools as organizations and permits the development of actionable recommendations. Integrating autoethnography with the notion of learning organizations enables the documentation of the researcher's subjective experiences within the framework of wider educational and organizational processes. This methodology provides a significant foundation for leaders and managers of doctoral schools aiming to operationalize the ideas of a learning organization. The analysis's conclusions emphasize areas needing enhancement and offer insights into how Senge's theoretical framework might facilitate the development and adaptation of educational institutions within a rapidly evolving society.

RESULTS OF APPLYING SENGE'S LEARNING ORGANIZATION MODEL TO DOCTORAL SCHOOLS: FINDINGS AND ANALYSIS

A learning organization is characterized by a continuous and deliberate process of learning that is embedded within its structure and culture (Finger & Brand, 1999, p. 137; Örtenblad, 2018, pp. 150-158). Learning constitutes not merely an organizational activity but an essential prerequisite for sustained development and adaptability. In a learning organization, all members engage in learning to enable change and foster ongoing improvement.

A doctoral school in Poland functions as a learning organization by promoting an environment conducive to continuous knowledge generation, critical reflection, and intellectual development. Doctoral candidates, lecturers, and administrative personnel jointly engage in and gain advantages from this dynamic educational ecosystem. The capacity of the doctoral school to expand, adapt to changing academic and societal needs, and enhance research quality depends on its commitment to fostering a culture of continuous learning and development.

DISCIPLINES OF THE DOCTORAL SCHOOL AS A LEARNING ORGANIZATION

Shared vision

A learning organization is not possible without a common vision that unites all members of the organization. It must be a vision shared and approved by all employees, not the visions of individual individuals imposed on other co-workers (Jackson, 2021, pp. 134-168; Senge, 1990). At the institutional level, a shared vision is reflected in documents that articulate the school's vision, mission, and development strategy. Goals should align with the school's value system. For the institution to produce a document that impacts its daily operations, it is crucial to reach a consensus on core values

that will inform the goal-setting process. When a clear vision is established, members of an organization develop a sense of responsibility within their group, cultivate a shared identity, and engage in the development of standards and practices that facilitate the attainment of their objectives. The educational vision of a doctoral school is typically outlined in the founding document and the curriculum. Because doctoral schools are not legally required to create a development strategy document, few schools undertake this task.

Research conducted under the MEiN-PW project titled “Polish-Ukrainian cooperation of representative institutions representing rectors for the improvement of university operations” reveals that only three out of the 47 analyzed doctoral schools have created a strategic document outlining their development directions (Kraśniewska & Pabjańczyk-Wlazło, 2021). Collective action is essential for community members. Building a common vision among individuals who engage in work solely out of obligation presents significant challenges. Developing a vision for the future of doctoral education facilitates the identification and utilization of emerging opportunities and possibilities. Developing a vision for the future of doctoral education is crucial for identifying emerging opportunities and enhancing its effectiveness. Scholars emphasize the need to reconsider the purpose, structure, and outcomes of doctoral programs (Colbeck, 2007). This includes incorporating professional skills, fostering interdisciplinarity, and adapting to changing research paradigms (Colbeck, 2007; Nerad, 2010). Web-enhanced instruction presents both challenges and possibilities for doctoral education, highlighting the need to study distance learning trends at this level (Mullen, 2004). The definition of a doctorate is influenced by available resources and institutional standards, with strategies ranging from traditional approaches to exploring new opportunities within doctoral parameters (Gale, 2003).

A shared vision is essential for an organization to evolve in a cohesive and sustainable manner. The vision delineates the organization’s direction and operational framework. It is grounded in individual and collective values while also considering the organization’s identity. The vision serves as a signpost for participants by guiding them toward the implementation of specific states of affairs. A shared vision is crucial for organizational cohesion and sustainability, particularly in educational settings. Research indicates that shared visions foster genuine commitment and enrollment rather than mere compliance (Voogt et al., 2021).

The strategy of a learning organization is based on the ability to develop itself, to develop new and useful solutions, to create a new reality. This is facilitated by targeted actions that motivate, inspire, and identify development opportunities, experiments, and systematic training (Baruk, 2006). All decisions made in a learning organization are based on knowledge, and each new experience is the basis for expanding it. A learning organization is based on the intellectual and intuitive potential of all its employees, who, in order to achieve their own goals, strive for its continuous development (Klak, 2021).

Team learning

Team learning is primarily about (1) creative thinking through complex problems in order to achieve synergy, (2) innovative but at the same time coordinated, and (3) mutual support by members of different teams. Therefore, although individual knowledge and skills are used, it is a team discipline that requires, above all, dialogue, discussion, and joint exercises and training (Bańka, 2002). Team learning is the result of cooperation between competent people who exchange information and observations. Team members must reflect on the course of processes and talk about mistakes. The Doctoral School in Poland offers a significant opportunity, primarily through the meetings of the Doctoral School Scientific Council. The frequency of these meetings depends on the doctoral school (e.g., monthly or bi-monthly) and typically addresses current operational issues, including recruitment protocols, mid-term evaluation processes, faculty feedback on doctoral candidates, and supervisors’ assessments, among others.

Personal mastery

A key element of the organization is the personal and professional development of the staff responsible for organizing education at the doctoral school. This has a positive impact not only on improving the quality of teaching but also on building a culture of continuous learning. This scenario is somewhat compelled since doctorate schools in Poland have only been established since 2019 and represent a novel kind of doctoral education; therefore, their organization remains in a state of development and enhancement. Conversely, the professional growth of the personnel must be intrinsically driven, as only this mindset ensures the genuine advancement of the doctorate school. The doctoral school, as an open system, must facilitate interactions between its internal and external environments to effectively address challenges and embrace necessary changes, innovations, and new knowledge, which will emerge through analyses, innovative solutions, feedback, and self-assessment. Learning can create a culture that is receptive to change and is an important parameter for adopting change (Kruse, 2003; Silins & Mulford, 2002). Continuous education and updating of staff knowledge are essential elements of the proper functioning of the doctoral school.

Meetings among doctoral school management staff create valuable opportunities for both team learning and personal development. Many universities running doctoral schools joined the agreement, establishing the All-Polish Conference of Doctoral Schools. On 12 May 2023, the first meeting of the Steering Committee of the All-Polish Conference of Doctoral Schools was held. The Committee was established on the basis of an agreement signed by 28 Rectors of higher education institutions. The responsibilities of the Polish Conference of Doctoral Schools encompass various activities, including the collaboration and advancement of doctoral schools, the exchange of information on initiatives related to doctoral education, the mutual promotion of projects undertaken by these schools, the execution of joint projects targeting doctoral students, and the submission of joint requests to relevant authorities for interpretations of legal regulations concerning doctoral education and the functioning of doctoral schools.

Important initiatives supporting the development of staff and, indirectly, the development and improvement of schools include two scientific conferences organized so far (in 2023 and 2024), attended by directors of doctoral schools and representatives of the Ministry of Science and Higher Education. From the perspective of doctoral school management personnel, monthly online meetings are highly beneficial. The events are conducted under the theme ‘Challenges of Managing a Doctoral School’ and take place on the final Friday of each month, commencing in 2021. Participants in the meeting addressed the issues and challenges confronting doctoral schools in Poland, exchanged solutions, and evaluated their respective advantages and disadvantages. These solutions facilitate the mutual reinforcement of activities designed to enhance the understanding of doctoral schools and their operations. All members concentrate on accumulating knowledge capital to develop mechanisms that enhance its operational effectiveness. The examples indicate that management staff can pursue development and team learning beyond their doctoral school; however, the knowledge and experience acquired should foster development and team learning within the school itself. The acquired knowledge, or the potential for its immediate application in all aspects of the doctoral school’s operations, facilitates efficient functioning and ongoing development.

Mental models

Any managerial activity is directed by deeply embedded ideas, strategies, ways of understanding and guiding principles, or mental models. They are completely natural; everyone has them, whether or not they are aware of them, and they perceive the world through them. Managers’ mental models are theirs, but they change with new experiences. Deeply embedded in the mind, mental models set perception in a certain way. They use them to make differentiating assessments (Krzakiewicz, 2014).

The mental model related to the organization of education at a doctoral school, including the work of academics teaching at the doctoral school and/or acting as supervisors, is their attitude towards doctoral students and the perception of their place and role in the structure of the university.

Research on doctoral education reveals a complex landscape of perceptions and experiences. Doctoral students often begin with a deformed perception of the PhD journey, which evolves over time as they navigate the academic environment (Coutinho, 2020). This transition can lead to changes in career thinking and decision-making, influenced by personal relationships and growing knowledge of opportunities (McAlpine & Emmioglou, 2015). Interestingly, supervisors tend to view themselves primarily as researchers rather than mentors and often perceive their doctoral students as future technicians rather than researchers (Coutinho, 2021).

Another example is the perception of a person studying at a doctoral school as a student rather than a young researcher (Kola, 2020). Extreme negative examples include treating doctoral students as 'cheap labor' who are at the full disposal of their supervisor or imposing obligations that go beyond the scope of legal regulations. Negative phenomena also include failure to respect the intellectual property rights of doctoral students. These thought patterns may be the result of previous experiences and perceptions of doctoral students during the period when doctoral studies operated as third-cycle studies or individual experiences of staff. Identifying and modifying mental models among university employees involved in doctoral education may lead to improved attitudes and a cohesive alignment with the doctoral school's vision. However, altering deeply ingrained mental models may encounter resistance.

System thinking

In learning organizations, managers should take on the role of creating the conditions that enable others to act. In doctoral schools, this role should/can be played by directors/managers/deans. The director of the doctoral school as a learning organization is a designer. The essence of design is to see how the elements of the system cooperate in action as a whole (Senge, 1990). Each of the entities in the doctoral school as a learning organization has its own tasks to fulfill, which affect the entirety of the organization. Systems thinking is essential for more effective management of oneself and others. It helps to understand the complexity of processes and determine ways to improve them. System thinking teaches how to create teams and direct teamwork because any team functions as a system. System thinking allows us to see beyond what appear to be isolated and independent events to the underlying structures. This enables managers to recognize relationships among events and thus improve their ability to understand and influence them (Krzakiewicz, 2014).

The role of supervisors and teaching staff in doctoral schools is evolving to meet changing demands. Research indicates a need for improved scientific preparation and increased dissertation completion rates (Krasinskaya & Klimova, 2020). Supervisors must balance multiple roles, acting as team leaders, guides, and teachers (Coutinho, 2021). There is a growing emphasis on developing innovative pedagogical skills among doctoral students and faculty. However, challenges persist, including mismatches between course content and student needs and inadequate resources for experimental work. To address these issues, suggestions include implementing individual educational paths tailored to students' career orientations (Krasinskaya & Klimova, 2020), fostering creative and professional qualities in teachers (Krasinskaya & Klimova, 2020), and improving doctoral education through curriculum changes and enhanced supervision processes (Coutinho, 2021). These adaptations aim to better prepare doctoral students for both research and teaching roles in higher education.

The role of supervisors and teaching staff in the doctoral school involves enhancing qualifications, facilitating dialogue among all stakeholders, and embracing change and innovation. It is essential to establish conditions conducive to dialogue, promote collaborative discussions among academic faculty and management, share experiences, and address issues collectively.

INTERPRETATION OF CHALLENGES IN THE MANAGEMENT AND FUNCTIONING OF DOCTORAL SCHOOLS: INSIGHTS FROM THE SEVEN LEARNING DISABILITIES FRAMEWORK

This section provides an analysis based on autoethnographic reflection, informed by personal experiences and observations in the context of doctoral schools. This analysis utilizes Peter Senge's concept of learning disabilities to theoretically examine the challenges encountered by doctoral schools regarding organizational learning. The insights provided aim to demonstrate the application of Senge's model within the context of doctoral education rather than to offer a comprehensive comparative analysis. The author seeks to identify and analyze significant barriers to learning in doctoral schools while exploring potential solutions to enhance their management and operation.

I am my position

The growth and continuous learning of a doctoral school enhance the professionalism and quality of education provided to doctoral students. Promoting the acquisition of new skills or the enhancement of existing ones among staff is a highly beneficial decision for management. This may encounter resistance from staff experienced in educating doctoral students under the previous system. An academic who has consistently served as a supervisor for an extended period may need to acquire new skills or enhance existing ones. The proposed new forms of education within the doctoral school or related elements may be subject to misunderstanding and, consequently, lack of acceptance. An example includes assessing the quality of supervisory guidance provided to doctoral students, for instance, via a survey. An evaluation may be conducted during the mid-term assessment, occurring at the midpoint of the training period. This appears warranted, as both the doctoral student and their supervisor share responsibility for the progress of the PhD candidate.

Moreover, supervisors and other academic staff may identify their roles with specific positions and assigned tasks, which leads to a lack of responsibility for the overall results of doctoral education. As a result, they may not see their impact on the entire doctoral education system and cooperation with doctoral students.

The enemy is out there

In discussing the second learning disability concerning the operations of doctoral schools and their associated challenges, it is essential to examine the legal conditions stemming from regulatory amendments that impact their functioning. In doctoral education, a common issue is the failure of candidates to complete their dissertations within the designated timeframe. In these instances, responsibility is transferred to another party. The COVID-19 pandemic serves as an example of a situation that restricted research opportunities; however, it has also been utilized as a rationale for requesting extensions on dissertation submission deadlines or for justifying a lack of progress. Historically, the previous doctoral education system in Poland identified an external factor contributing to candidates' failures: the scarcity of scholarships. This situation compelled candidates to juggle professional responsibilities alongside their studies and dissertation development. The perceived "enemy" appears diminished within the restructured doctoral education framework, wherein each doctoral candidate is allocated a standardized scholarship.

Supervisors may face challenges when collaborating with doctoral candidates that could be addressed through improved pedagogical skills. Supervisors frequently attribute their dissatisfaction with collaboration to issues related to the candidate's behavior and attitude. Supervisors often believe they provide more guidance than candidates perceive, highlighting the importance of clear communication (Cardilini et al., 2022).

Not all supervisors demonstrate enthusiasm or motivation to enhance their knowledge or improve their teaching skills, guidance, and mentoring capabilities. While research output is considered the most important selection criterion for new academics, teaching experience, and qualifications are valued less (Jepsen et al., 2012). The professional development of PhD supervisors faces challenges in

modern universities. Institutions are implementing programs to enhance supervisory practices and adapt to changing contexts. The University of Sydney developed a Recognition Module for supervisors to reflect on their practice through online case studies, providing evidence of development and institutional recognition (Brew & Peseta, 2004). Successful programs for experienced supervisors require strong incentives from management, aligned teaching principles, and well-evaluated courses that foster intrinsic motivation (Wichmann-Hansen et al., 2019). Supervisors navigate multiple perspectives in their roles, balancing quality research, economic viability, and international adaptation, with economic considerations often dominating (Bøgelund, 2015).

In the Polish academic environment, financial concerns are acknowledged. Financial concerns in Polish academia have been a persistent issue since the transition from communism to a market economy (Kwiek, 2011). Supervisors are compensated exclusively for activities within the educational program, excluding involvement in seminars with doctoral candidates or other meetings, which fails to accurately reflect the time and effort invested in supervisory duties. This suggests that teaching effectiveness and personal development are viewed as organizational responsibilities rather than as components of supervisors' goals to enhance their educational practices. While it can be argued that the university ought to enhance funding and resources for supervisor training or adjust the doctoral program, especially considering national funding policy limitations, this may only serve as a partial solution. The university encounters the challenge of creating programs that PhD supervisors recognize as advantageous for their personal and professional development.

The illusion of taking charge

Supervisors tend to believe they are providing good supervision, that they have organized their activities effectively, and that doctoral candidates will respond positively to their preparation. However, it turns out that progress and outcomes are not always as expected. It can be argued that some of these issues may stem from poor program design, such as not equipping doctoral candidates with the necessary methodological skills at the right time, as expected by the supervisor, or not providing enough joint meetings where knowledge can be shared and mutual learning can occur, rather than being due to the incompetence of either the candidates or the supervisors. Another example is the excessive burden placed on doctoral candidates with mandatory teaching duties with students or organizational work for the institution, which significantly limits their time for conducting research for their doctoral work. As Senge (1990) states, "true proactivity comes from recognizing how we contribute to our problems" (p. 37). This means that those responsible for the educational programs should reflect on their contribution to the emerging issues related to doctoral education and its effectiveness rather than blaming the supervisors or the doctoral candidates.

The fixation on events

In the context of the functioning of doctoral schools in Poland, such excessive concentration may occur in relation to the mid-term evaluation. The thinking of both the supervisor and the doctoral students may be strongly focused on the positive 'passing' through the mid-term evaluation process, understood as a checkpoint confirming that the process of preparing the dissertation is heading in the right direction and that the doctoral student can receive a higher scholarship. This concentration may come down to meeting the requirements and carrying out tasks in accordance with the Individual Research Plan approved during the first year of education, while after passing this checkpoint and the lack of subsequent - required by law - motivation to work, as well as the effort put into completing the education process may decrease or recede into the background.

In turn, if there are any difficulties, academic staff may perceive problems in doctoral education as isolated events rather than looking at them in the context of long-term, complex processes. For example, delays in completing doctoral theses are often explained by individual difficulties, e.g., resulting from health problems or the temporary personal situation of the doctoral student, rather than analyzing long-term barriers.

From the perspective of managing a doctoral school, it can be concluded that the discussions of management staff are dominated by events and their causes: recruitment to the doctoral school and its (poor) results, the course of the mid-term evaluation and its timeliness; planning of staffing of classes conducted within the doctoral school, updating the school regulations and/or the curriculum, reporting, etc. Meanwhile, Senge (1990) stated that creative learning in an organization will not be possible if people's thinking is dominated by single, fleeting events.

The parable of the boiled frog

Sometimes, deans, doctoral school directors, or professors who are fully engaged in daily management may not see the long-term consequences of their daily choices. It also happens that they fail to immediately recognize the early signs of dysfunction that will eventually lead to a crisis. It would, therefore, be necessary to slow down and observe slow processes that may carry greater risks.

The delusion of learning from experience

Administrative decisions in the academic environment can have far-reaching effects that occur long after the decision is made by the school leader and after the leadership of the doctoral school changes. This role is typically term-based, and the combination of this time delay and the fact that institutional memory is usually short means that we do not always experience the consequences of our decisions. Therefore, the head of the doctoral school may not always have the opportunity to learn from these outcomes.

The myth of the management team

Experiencing a traditional school setting and then a university setting teaches individuals not to admit when they don't know the answer or don't have the expected competencies of their position. Even when someone feels insecure, they learn to protect themselves from the discomfort of uncertainty. This same process blocks any new understanding. The result is what Argyris (2003) calls 'skilled incompetence,' teams full of people who are exceptionally adept at avoiding learning and who create pretense.

There may be a fallacy in believing that university authorities or doctoral school management can solve all problems. Doctoral education problems are often so complex that they require the involvement of various stakeholders, not just decisions made by a narrow circle of managers.

CONCLUSIONS: ANALYSIS OF SENGE'S LEARNING ORGANIZATION CONCEPT IN THE CONTEXT OF POLISH DOCTORAL SCHOOLS

A learning organization can adapt to evolving situations and foster possibilities for enhancement for all those involved in its operations. In a learning organization, prioritizing the ongoing development of new skills, seeking opportunities, and implementing novel patterns of activity is essential (Senge, 1990). Moreover, a crucial component of learning involves obtaining feedback on mistakes made, receiving guidance on how to avoid them, and, when they do occur, learning how to correct them. Considering this and the analyses offered in the paper, it can be stated that doctorate schools now operating in Poland can be classified as learning organizations. As highlighted in the article, these schools exhibit several defining characteristics that align with the concept of learning organizations. These include learning from errors, regular evaluations of operational procedures, ongoing development of management, supervisory, and administrative personnel, embracing risks, exploring methods to enhance the quality and effectiveness of education, and making decisions grounded in empirical evidence. By adhering to Senge's (1990) principles, Polish doctoral schools can harness shared vision and team learning to foster a more adaptive educational environment.

This paper offers a framework for understanding how Polish doctoral schools can operationalize the concept of a learning organization, providing insights applicable to similar educational contexts. The

learning process occurring in doctoral schools is not limited to doctoral students alone but extends to supervisors and the entire academic staff involved in the development of educational programs. In relation to them, new teaching methods and solutions, including organizational ones, are continually sought. Through this, doctoral schools demonstrate their commitment to adaptive learning by adjusting their strategies in response to emerging challenges. Furthermore, doctoral schools must plan their activities with a long-term perspective, taking into account not only current challenges but also future changes in the academic world, technology, and society.

The seven difficulties in learning outlined and examined within the framework of doctoral education in Poland highlight the necessity for enhanced systemic thinking in the administration of a doctoral school, along with the significance of collaboration and contemplation regarding the processes occurring within this educational system. These challenges also emphasize the importance of collaboration and reflection on the processes occurring within the educational system. This article enhances the field of organizational knowledge by examining the implementation of Senge's learning organization model in the context of doctoral schools in Poland. By integrating Senge's conceptual framework, the paper demonstrates how the model can provide a comprehensive analysis of the operations of doctoral schools. It shows how to identify key challenges and areas for improvement in the management and organization of doctoral schools through principles such as personal mastery, shared vision, and team learning. This approach not only deepens the understanding of current issues but also opens new avenues for resolution, laying a solid foundation for continuous improvement.

The effectiveness of doctoral schools depends largely on the quality of the administrative staff of universities and other entities running doctoral schools – their training, willingness to cooperate, speed of adaptation to the new reality, including the legal one, as well as a specific academic culture that should permeate the activities of all members of the university community. Organizational factors such as network collaboration, resource availability, and common purposes also play a significant role in shaping the effectiveness of doctoral schools. As noted by Baschung (2020), these factors enhance the capacity of doctoral schools to adapt and evolve, ensuring a more responsive educational environment. Furthermore, government funding is another crucial determinant of the quality of doctoral education, as it directly influences both the quality of training and the availability of faculty resources. This is supported by Pedraja-Rejas et al. (2016), who emphasize that government investments are key to strengthening doctoral programs.

In summary, Senge's (1990) five disciplines provide a comprehensive framework for the development of learning organizations. By fostering personal growth, challenging mental models, building shared visions, enhancing team learning, and adopting systems thinking, this framework offers a powerful tool for the ongoing development of organizations. For higher education institutions, especially doctoral schools, Senge's principles can serve as a guide to not only adapt to changing environments but also create a culture of continuous improvement and innovation, ensuring that these institutions can meet the evolving needs of doctoral candidates and faculty alike. These principles have been successfully applied across various sectors, demonstrating their versatility and impact (Stevens, 2019). However, further refinement and integration of these disciplines are essential to meet emerging challenges and seize new opportunities in organizational learning, particularly within the context of doctoral schools.

Although the learning organization model offers benefits for doctoral schools, several limits and crucial issues must be addressed. A possible problem is that the adaptation process may not always proceed smoothly, as it significantly depends on the commitment and preparedness of all participants, including teachers, administrative personnel, and PhD candidates. Resistance to change, a prevalent impediment in organizational transformation, may undermine the efficacy of this method. Moreover, although ongoing feedback and learning from errors are crucial, the pressure to uphold elevated academic standards and fulfill performance expectations may create an environment where mistakes are inadequately recognized or addressed, so constraining opportunities for improvement. Moreover, the

efficacy of the learning organization model in doctoral programs is contingent upon adequate resources and institutional backing to effectuate the requisite transformations. Insufficient finance and infrastructure may jeopardize the capacity for innovation and the development of a really flexible environment. These constraints underscore the necessity of meticulously evaluating the context in which the learning organization model is implemented and ensuring a balanced approach to innovation and risk management.

Regarding doctoral schools in Poland, Senge's (1990) concept of a learning organization, however promising, may encounter specific flaws and problems. Doctoral schools frequently exhibit a deficiency in a unified vision and organizational strategy necessary for the effective implementation of this model, especially when leaders and faculty members lack adequate training or demonstrate insufficient commitment to evolving the institution into a learning organization. Moreover, the learning organization model necessitates adaptability and the capacity to respond swiftly to evolving circumstances. In Polish doctoral schools, the implementation of such changes may face considerable challenges due to stringent organizational and financial structures and constrained resources. Consequently, despite the prospective advantages, the notion of a learning organization may encounter resistance that constrains its comprehensive adoption inside Polish doctorate schools.

RECOMMENDATIONS FOR ENHANCING THE FUNCTIONING OF DOCTORAL SCHOOLS AS LEARNING ORGANIZATIONS

Doctoral education and training are undergoing a paradigmatic shift, as they are no longer viewed solely as an academic matter, limited to the responsibilities of an individual professor or, at most, a faculty. Instead, they have become a focal point of institutional and national policies (Enders, 2005; Kehm, 2006), as evidenced by the higher education reform in Poland. This shift highlights the growing recognition of the importance of a more structured, collaborative, and inclusive approach to doctoral education, emphasizing not only academic excellence but also broader institutional and societal goals.

The doctoral school in Poland is such an innovative concept in relation to previous practices related to educating doctoral students (Kwiek, 2020; Sakowicz, 2023) that it requires not only organizational changes but also a change in the mentality of some people responsible for/related to educating young researchers (Sakowicz, 2023). This transformation, however, goes beyond structural adjustments; it involves challenging traditional academic norms and embracing new methods of support and development for doctoral candidates. It is particularly important to overcome the resistance among academic teachers to introducing various types of activities that may seem unusual for this type of education. In line with this, the creation of a more adaptive environment is crucial, one that encourages flexibility in thinking and fosters a mindset that is open to innovation and continuous improvement. In a learning organization, there is a break from the vision of the 'grand strategist' in favor of constantly questioning established patterns of thinking and considering many possible scenarios. An organization learns and changes. This dynamic is particularly relevant in the context of doctoral schools, where the goal is not only to educate but also to create an environment that evolves alongside the needs and challenges faced by PhD candidates and faculty. Although doctoral schools in Poland are not separate administrative units, they are usually separate in the structure of the university and have their own autonomy.

Building on this idea, regular reflective meetings should be encouraged, where PhD students, supervisors, and administration and management staff can discuss progress and challenges and propose improvements. These meetings should foster open dialogue, where each party can share their observations without fear. Such reflective practices are essential for ensuring that all voices are heard and that the doctoral school remains responsive to the needs of its participants. Open communication allows for a better understanding of current issues and avoids 'skilled incompetence' (Argyris, 2003),

where people avoid admitting uncertainty or lack of knowledge. By embracing open dialogue, doctoral schools can strengthen their capacity for self-reflection and improvement, thus better supporting the growth and development of both doctoral candidates and the academic institution as a whole.

The professional development of the management and administration staff of a doctoral school should not be limited to their individual case. Fostering a culture of knowledge sharing and collaborative learning among staff members is essential, as it bridges the gap between personal and organizational development. Sharing information from completed forms of development, the need to reflect on them, and how they can be used in the doctoral school is building a path between personal and organizational development. Therefore, it is worth supporting these activities. In this context, it becomes crucial to create opportunities that encourage not only individual growth but also collective advancement within the institution. The proposed solution involves introducing a structured program that includes mentoring and regular feedback. Such a program would not only promote individual professional growth but also contribute to the creation of a more cohesive and effective organizational culture. These initiatives could serve as the foundation for the continuous development of management staff competencies, enabling them not only to acquire new skills but also to effectively implement innovative practices in the functioning of doctoral schools. This program could be complemented with workshops and training sessions that would help overcome resistance to change and increase openness to new initiatives. By focusing on developing both personal competencies and organizational capacity, the program would ensure that the management staff is well-equipped to navigate the evolving landscape of doctoral education.

It is also recommended that management strategies be introduced based on long-term goals, not just short-term results. Shifting the focus from immediate outcomes to sustainable development strategies aligns with the broader goals of creating a dynamic and responsive doctoral school. The management of a doctoral school should emphasize monitoring the educational processes, not just the results (e.g. the number of defended doctoral theses in a given year). A long-term perspective allows for better adjustment of activities to the actual needs of doctoral students, avoiding crises and striving for sustainable development of the entire doctoral school. This broader approach to management ensures that short-term actions are aligned with long-term aspirations, preventing reactive responses to challenges and fostering a proactive, future-oriented mindset. Furthermore, while continuity in administrative activities is critical, establishing a framework for ongoing evaluation and adjustment would help maintain the relevance of changes over time. Balancing short-term and long-term goals is also essential; integrating immediate objectives that align with future aspirations can address current challenges without losing sight of the overall vision. Such a framework allows the doctoral school to be both adaptable and resilient, ensuring its long-term success in a rapidly changing academic environment.

It is also worth creating mechanisms that will allow for maintaining the continuity of administrative and organizational activities, regardless of changes in the term of office of the doctoral school management. This continuity ensures that the doctoral school can maintain stability and consistency in its operations, even as leadership changes. This will help avoid situations in which administrative decisions made by one management have unforeseen negative effects in the long term. By establishing robust mechanisms that prioritize continuity, the doctoral school can safeguard its long-term strategic objectives and avoid disruptions caused by transitions in leadership.

These recommendations aim to improve the efficiency of the functioning of doctoral schools and to create conditions favorable to both supervisors and doctoral students to fully utilize the potential of this form of education as a learning organization. By implementing these strategies, doctoral schools can evolve into truly dynamic learning organizations capable of adapting to new challenges and maximizing the potential of all participants.

The benefits of organizational learning include greater flexibility, adaptability, and increased efficiency. As doctoral schools adopt a learning organization framework, they position themselves to respond effectively to the ever-changing landscape of higher education. As a learning organization, the doctoral school also has a better chance of achieving success in a dynamic environment, as well as success in terms of recognition in the doctoral school market. Ultimately, this focus on continuous learning and adaptation enhances the institution's reputation, ensuring its ongoing relevance and success in the global academic community.

LIMITATIONS AND IMPLICATIONS FOR FURTHER RESEARCH

The reflections presented in the text include an attempt to analyze doctoral schools through the lens of a learning organization, specifically using Senge's concept of the five disciplines and its characteristic properties. It is important to note that the analyses offered in the article are deductive and theoretical in nature.

Since deduction involves drawing conclusions based on pre-established theories or hypotheses, it can lead to selective interpretation of data, potentially overlooking aspects that do not fit within the theoretical framework. In the context of doctoral schools, such biases may affect the understanding of the real needs, challenges, and specificities of these institutions. For example, if the analysis focuses primarily on management structures or formal processes, it may miss more complex, informal interactions between participants in the educational process, which significantly impact the effectiveness of doctoral schools. Several external factors, such as changes in educational policy, the evolving role of doctorates in the labor market, or the development of international cooperation, may shape the experiences of doctoral candidates and management staff in ways that were not fully captured in the analysis. This underscores the importance of complementing theoretical considerations with empirical research, allowing for a more comprehensive perspective on the functioning of doctoral schools.

To mitigate potential biases, several measures were adopted in this study. A methodology grounded in autoethnography was employed, allowing the researcher to integrate personal experiences within the broader context of social and organizational phenomena. Simultaneously, to reduce subjectivity, a comprehensive literature review was conducted, incorporating works from other authors to ensure the findings were grounded in existing research. Furthermore, the analysis concentrated on general processes and actions stemming from the organization of the doctoral school system in Poland rather than focusing on specific cases of individual institutions. This approach aimed to minimize the impact of personal experiences on the interpretation of the results. These choices were made with the goal of bolstering the study's credibility and objectivity. Despite these efforts, it is essential to acknowledge that autoethnographic reflections inherently carry a degree of subjectivity, which, while valuable for understanding individual perspectives (Olobia, 2023), may not fully represent the diversity of experiences across different doctoral schools.

Building on these foundations, future research could explore the extent to which doctoral schools recognize themselves within the framework of a learning organization and their deliberate efforts to implement such concepts. In this context, an examination of the driving forces behind the development of learning within doctoral schools could yield valuable insights. The article emphasizes that, on the one hand, at the current stage of the functioning of doctoral schools in Poland (the possibility of establishing them from the academic year 2019/2020), the learning process is mainly the result of legal conditions and the specific novelty of this organization. On the other hand, the driving force of learning doctoral schools may be the desire to improve the organized education process, perhaps the desire to experiment, competitive pressure, and/or the need to survive in the higher education market. This duality suggests that while external regulations play a crucial role in shaping learning processes, internal motivations, and institutional agency should not be underestimated in fostering a culture of continuous improvement.

Furthermore, future studies could focus on identifying the key factors that influence the successful implementation of these principles, such as institutional culture, leadership styles, and faculty engagement. Exploring the potential barriers to adopting a learning organization approach within doctoral schools, including resistance to change or resource limitations, would also be valuable. Additionally, comparative studies between different countries or higher education systems could provide valuable insights into how various contexts influence the effectiveness of learning organization principles in doctoral education. This would encourage a more nuanced understanding of the complexities involved and inform strategies for overcoming these challenges.

Research on the recognition of doctoral schools within the framework of a learning organization, as well as their efforts to implement these concepts, could be conducted using a mixed-methods approach (Azorin & Cameron, 2010; Molina-Azorin et al., 2017), combining qualitative and quantitative methods. The qualitative approach could include in-depth interviews with representatives of doctoral school authorities, doctoral students, and administrative staff. These interviews would provide detailed information on how the functioning of doctoral schools as learning organizations is perceived. Additionally, they could reveal motivations, barriers, challenges, and perceived benefits related to implementing the concept of a learning organization within these institutions. Furthermore, document analysis, such as reviewing regulations, annual reports, and strategic plans, could serve as an important source of data on the formal foundations of developing a learning organization within doctoral schools. Such an analysis would help identify provisions related to learning processes that are formally planned within the structures of doctoral schools. The use of a mixed-methods methodology would allow for a more comprehensive understanding of the functioning of doctoral schools as learning organizations, considering both the perspectives of individual participants and the broader organizational context.

It would also be worth considering the inclusion of other models of organizational learning, which could enrich the analysis and provide a broader perspective on the effectiveness and practicality of implementing such concepts within doctoral schools. There are many approaches to organizational learning (Argyris & Schön, 1978; Casey, 2005; Deng & Tsacle, 2003; Ponnuswamy & Manohar, 2016) that differ depending on the priorities and specifics of a given organization, and their integration could deepen the understanding of this phenomenon in the context of doctoral education.

For example, Argyris and Schön's (1978) model of learning organizations, which introduces the concepts of 'single-loop and double-loop learning,' could serve as an interesting alternative to Senge's model. In this approach, a key role is played by the organization's ability to reflect on its assumptions, norms, and practices, which allows it to adapt to changing environments. Adopting this model in the context of doctoral schools could highlight the importance of self-reflection, evaluating past actions, and being open to changes that better address educational and organizational challenges.

Another model worth considering is Wenger's (2000) theory of 'communities of practice,' which focuses on the role of social interactions in the learning process. Wenger (2000) emphasizes that learning organizations are places where employees (or doctoral students, in this case) not only acquire knowledge individually but also co-create it within a community of practice. From the perspective of doctoral schools, this model could highlight the importance of collaborative research, experience exchange, and creating an environment where doctoral candidates and their academic supervisors work together, learn from each other, and develop skills within a shared academic practice. It is also important to note that in this approach, the collaboration among directors of doctoral schools in Poland plays a significant role. These directors, through their meetings and joint activities, form a community of practice where they collectively engage in learning and share experiences. Their interactions can provide valuable insights into the challenges and opportunities of implementing organizational learning principles within doctoral schools. By collaborating with one another, they not only address practical issues related to the functioning of doctoral schools but also contribute to the development of a shared understanding of best practices and strategies for continuous improvement. This collaborative learning process among directors can strengthen the overall learning culture within

the entire network of doctoral schools, reinforcing the notion that learning is not limited to doctoral candidates alone but extends to those who lead and support these institutions.

Furthermore, in light of the challenges faced by contemporary organizations, it would be worthwhile to consider applying the concept of a learning organization from the perspective of sustainable development (Piccardo et al., 2022). In this case, it is important to incorporate not only aspects of knowledge management and skill development but also social and environmental issues, which are becoming increasingly important in higher education. For example, a model of sustainable learning could help develop strategies that not only improve organizational effectiveness but also contribute to shaping an ethical, socially responsible attitude among doctoral candidates and faculty members.

Integrating these various models with Senge's approach could create a more comprehensive framework for analyzing learning processes in doctoral schools, taking into account the diversity of approaches that may better reflect the complexity of educational organizations. Including these theories could also provide valuable insights into the effectiveness of implementing organizational learning in the context of the changes taking place in the Polish doctoral education system and allow for a more comprehensive evaluation of potential difficulties and opportunities for adaptation to new realities.

Building upon this, it is recommended to conduct comparative research that would enable a systematic comparison of Polish doctoral schools with international models of doctoral education. Such studies could encompass an analysis of differences in the structure of doctoral programs, approaches to mentoring and professional development support, and methods for assessing the progress of doctoral candidates. For instance, a comparison could be made between Polish doctoral schools and systems in Western European countries, such as Germany or the United Kingdom, which are characterized by more diversified models of international collaboration and individualized doctoral candidate development (Altbach et al., 2020). Additionally, it would be valuable to include systems from countries with alternative approaches to integrating doctoral candidates within university structures. This type of research could provide significant insights into best practices that may be applicable in the Polish context while also identifying areas in which Polish doctoral schools could further evolve.

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