








“Challenges of Ph.D. training in social sciences and humanities in Kazakhstani universities”

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CHALLENGES OF PH.D. TRAINING IN SOCIAL SCIENCES AND HUMANITIES IN KAZAKHSTANI UNIVERSITIES

Abstract

This study aims to identify challenges in the training of scientific personnel in the field of social sciences and humanities at the doctoral level in Kazakhstan. It proceeds from the assumption that successful completion of a Ph.D. program is conditioned by internal and external factors that influence the educational process and may lead to challenges in Ph.D. thesis defense. The study employs an explanatory-sequential approach within a mixed-methods design, incorporating economic-statistical, regression, and content analysis. Data were gathered through questionnaires from 61 current students and graduates of Ph.D. programs in the social sciences and humanities. Findings indicate that having a job made it more challenging for respondents to study and complete their Ph.D. programs, as employment requires time and effort; however, the additional monthly income besides scholarship helped reduce financial stress, thereby supporting their academic progress. Women found studying easier than men, while married respondents experienced fewer challenges than single ones. Although 36.1% of respondents expressed high satisfaction with Ph.D. training quality, the majority reported challenges, with 65.65% noting issues in the educational process, 52.5% identifying problems in scientific supervision, 33% raising concerns about teacher qualifications, and 25% highlighting infrastructure needs. Key factors influencing Ph.D. completion rates included an unstable study environment, characterized by frequent changes in regulations, and students' difficulties in meeting government-imposed requirements, especially publication in a Scopus database journal. The study's practical value is developing measures to enhance Ph.D. thesis defense rates by improving admission requirements, restricting external employment, increasing supervisor accountability, and adjusting publication standards.

Keywords

postgraduate education, doctoral study, Ph.D. program,
science, scientific personnel, public administration,
academic degree, educational process, Ph.D. thesis
defense, dropout level

JEL Classification

I21, I23, I28

INTRODUCTION

According to the "Concept of development of higher education and science in the Republic of Kazakhstan for 2023–2029", strengthening of intellectual potential is one of the essential tasks for science development in the country, which requires training of highly qualified scientific personnel in all fields of science. However, only a small number of Ph.D. graduates enter the field of science, which fails to compensate for the loss of human resources (NAS RK, 2022). The situation is aggravated by the fact that Kazakhstan has a low level of Ph.D. thesis defense in all fields of science. For instance, in the 2023–2024 academic year, 1,854 students have accomplished doctoral programs, while only 219 defended their Ph.D. theses, i.e. 11.81% (BNS, 2023a). In the last academic year, the defense rate was 15.23% (BNS, 2022), down from 25.6% in the 2020–2021 academic year (NAS RK, 2022), indicating

that the situation is worsening. In the 2023–2024 academic year, the defense rate for pedagogical sciences was 6.27%, humanities – 6.86%, and social sciences – 6.03%.

The fundamental documents governing Ph.D. education in Kazakhstan are the Model rules of admission to study in educational organizations implementing educational programs of higher and postgraduate education, the State obligatory standard of postgraduate education, the Model regulations on the dissertation council, and the Rules for awarding degrees. The two last documents set out precise and detailed requirements for awarding degrees, which are crucial for completing a Ph.D. program.

However, despite the modernization of Ph.D. education, there needs to be a higher level of Ph.D. thesis defense in the country, which may indicate the inefficiency of the public policy on training scientific personnel. High dropout rates and delayed completion of the Ph.D. program indicate a waste of government resources. So, the Ministry of Science and Higher Education of the Republic of Kazakhstan and the university administrations should pay attention to their policies and guide doctoral students toward successful completion. Research is needed to improve government and university policies and understand the reasons for the low defense rate in the country, particularly in the social sciences and humanities. It may be due to internal and external factors that lead to difficulties in training, conducting research, writing a Ph.D. thesis, or publishing research results.

1. LITERATURE REVIEW

The experience and completion of doctoral studies are crucial to the advancement of academia. Practical Ph.D. training and personnel management act as catalysts for change, directly impacting the number of Ph.D.-qualified staff in the R&D sector (Kireyeva et al., 2021). Doctoral students represent the next generation of scientists, and their education boosts the intellectual potential of the individuals and the nation. This process is critical to the development of science (Kangalakova et al., 2023). The success of completing the Ph.D. program and Ph.D. candidates' well-being is influenced by various factors, which can be divided into external and internal factors. External factors are represented by the candidate's supervision, university staff, socialization, and financial support, while internal factors are motivation, research skills, and self-regulatory strategies (Sverdlik et al., 2018).

Individual factors such as gender and age do not directly relate to Ph.D. program success or failure; instead, they can act as catalysts for dropout intentions (Quecano et al., 2024). Consequently, different studies present contradictory evidence. Some researchers have found that women are more likely to drop out than men (Castello et al., 2017; Jaksztat et al., 2021). They face challenges related to traditional gender expectations from their families, be-

ing more directly affected by family planning issues, and facing a forced choice between caregiving and professional responsibilities (Wall, 2008). Additionally, women may experience discrimination in the workplace (Wall, 2008), be more vulnerable to stress (Feizi et al., 2024), and be more prone to imposter syndrome (Chakraverty, 2020). These factors contribute to researchers' dissatisfaction, often expressed through symptoms of depression, stress, and illness (Sverdlik et al., 2020). On the other hand, some findings suggest that men are more likely to quit Ph.D. programs (Fang & Zhan, 2021; Ertem & Gokalp, 2022). A possible explanation for this phenomenon is that some men may enter Ph.D. studies with the wrong motivational factors, such as using the program to avoid military duties (Ertem & Gokalp, 2022). Other studies have found no relationship between gender and Ph.D. completion rates (Nori et al., 2020; Rajcan & Burns, 2021; Corner et al., 2024).

Regarding age, younger students may struggle during their education due to insufficient experience or lack of time management skills (Guzman et al., 2023). Mature-aged candidates, however, may face different obstacles, such as increased personal commitments or the need to catch up on new technologies (Fung et al., 2021).

Parenthood, the number of dependents, and family responsibilities place additional pressure on

Ph.D. candidates and can contribute to dropout intentions. Increased family responsibilities, such as having children, are linked to higher dropout rates (Jaksztat et al., 2021; Catalano & Radin, 2021), underscoring the importance of achieving a work-life balance in attaining a doctorate (Kaur et al., 2024). Family responsibilities can significantly hinder a Ph.D. program (Mogaji, 2021). The difficulties in maintaining a work-life balance often lead to dropout intentions (Phan, 2023; Kaur et al., 2024). However, some studies suggest that family support can encourage married individuals to complete their Ph.D.s (Wollast et al., 2018). Isolation and loneliness, which are influential factors in Ph.D. completion, can be mitigated by promoting social support and ensuring physical and emotional well-being (Mantai, 2019), which can be achieved through a balanced work-life approach. Moreover, other emotional health challenges associated with Ph.D. studies, such as high levels of anxiety, mental health issues, and burn-out, may be less significant for candidates with strong family support. Emotional wellness is critical to doctoral students' overall satisfaction (Nagy et al., 2019).

Previous academic achievements are often associated with Ph.D. success. A weak educational background, low academic performance, research inexperience, and a lack of essential skills are vital personal factors that hinder completion and raise dropout rates (Jaksztat et al., 2021; Amani et al., 2022). While past performance can help explain program failure (Visser et al., 2006; Mendoza-Sanchez et al., 2022), it should not be the sole focus for program coordinators (Bridgeman & Cline, 2022), as it is not always a reliable indicator of success (Petersen et al., 2018).

Motivation is a crucial personal factor influencing the success or failure of Ph.D. candidates (Amani et al., 2022). It is often driven by the desire to enhance career prospects, personal development, and an intrinsic interest in the chosen discipline (Brailsford, 2010). Socialization and motivational factors, such as future career opportunities, significantly shape doctoral students' satisfaction with their programs (Shin et al., 2018). However, motivation and well-being vary across program stages, peaking during coursework and dropping during the exam phase (Sverdlik & Hall, 2020).

Insufficient income levels and the necessity for doctoral students to work to cover personal and program-related expenses lead to higher withdrawal rates (Quecano et al., 2024). Employment is generally considered a distraction from Ph.D. studies and thus negatively affects the time required to complete the program. This issue becomes particularly critical in the final stages of the program when funding runs out while students must focus on completing their manuscripts (Geven et al., 2017). Nevertheless, the nature of employment can influence the relationship between job responsibilities and dropout intentions. Some studies suggest that research positions at the university can positively impact Ph.D. program outcomes (Bekova, 2021). Combining studies and work can benefit the education process if the job is related to the Ph.D. thesis (Bekova & Dzharafarova, 2019).

Ph.D. supervision, faculty support, and program structure are among the most studied institutional factors. To enhance student satisfaction and reduce dropout rates, program structures should include clear dissertation and program deadlines (Skopek et al., 2020). Additionally, promoting transparency in program policies, requirements, and technology platforms is essential for achieving these goals (Meyer et al., 2022).

Supervisor support is crucial for timely Ph.D. completion. For instance, doctoral students who felt supported by their supervisors during the COVID-19 pandemic performed better and were more satisfied with their Ph.D. experience (van Tienoven et al., 2022). Supervision and psychological and project characteristics significantly influence doctoral students' satisfaction. A high workload negatively correlates with satisfaction and success, while positively correlates with dropout intentions. Conversely, a positive supervisor-student relationship correlates positively with project success and negatively with dropout intentions (van Rooij et al., 2021). With the right supervisor-student match, doctoral students benefit from tailored teaching and discussions about issues arising during the Ph.D. process (Geraghty & Oliver, 2018). Additionally, working on a project closely related to the supervisor's research can enhance Ph.D. student satisfaction and increase program completion rates (van Rooij et al., 2021). Therefore,

university staff and Ph.D. supervisors should collaborate more closely to improve Ph.D. student satisfaction rates (Dericks et al., 2019).

Doctoral students are profoundly influenced by the perception of how they are valued and supported, particularly at the department or faculty level (Hunter & Devine, 2016). Faculty support fosters intellectual growth and academic socialization among Ph.D. candidates. Positive interactions and meaningful experiences with faculty members can promote a growth mindset and validate candidates' competence and potential (Posselt, 2018). Moreover, the overall research environment significantly impacts Ph.D. candidates' intentions to drop out, with questionable research practices, unethical supervision, and scientific misconduct being particularly associated with increased dropout rates (Kis et al., 2022). Improving the Ph.D. experience requires better communication between students and faculty, clear expectations, and supportive policies and practices (Gardner, 2009). The choice of institution significantly influences the experience of Ph.D. program participants. Structural inequalities exist among academic institutions, with elite institutions often offering more significant opportunities for students to access research funding, superior research facilities, a conducive research environment, and, in many cases, higher-quality supervision (Pasztor & Wakeling, 2018). Whereas lack of funding and associated financial difficulties negatively impact Ph.D. program completion (van der Haert et al., 2013). Inadequate funding can force students to seek alternative income sources, limiting the time they can dedicate to their Ph.D. theses and ultimately increasing the risk of dropout or delayed completion (Castello et al., 2017). Consequently, researchers emphasize the importance of financial support and subsidies for doctoral students (Guzman et al., 2023) and ensuring sufficient funding duration (Skopek, 2020).

Post-Soviet researchers have identified national-level barriers to Ph.D. success. For example, researchers have highlighted several issues: the challenges of transitioning to a structured Ph.D. education model, limited study time, limited skills required for publication, lack of funding, and the need for paid work (Maloshonok & Terentev, 2019). The literature defines motivational and de-

motivational national-level factors affecting doctoral students' success. For instance, a government-funded mobility program for doctoral students has motivated Kazakhstani researchers to achieve their goals by adapting to the constrained context (Kuzhabekova & Mukhamejanova, 2017). However, the requirement to publish in journals with a nonzero impact factor to complete the Ph.D. program presents an insurmountable obstacle for many candidates. Therefore, support structures must accompany such requirements (Kuzhabekova & Ruby, 2018).

In summary, the issue of Ph.D. student satisfaction, often reflected in completion and dropout rates, has attracted global scholarly attention. Numerous studies have examined internal and external factors influencing doctoral student success, with national policy being a significant variable. National policies play a critical role in Ph.D. program completion by imposing requirements on thesis defense, mandating institutional standards for research infrastructure, regulating Ph.D. student supervision, students' assessment and reporting procedures, and the timing and funding of government scholarships. However, research on how government policies impact student motivation and well-being remains limited. While Kazakhstani scholars have investigated the effects of such policies on faculty, the specific impact on doctoral students is still underexplored. Given the persistently high dropout rates, further empirical research is essential, as these rates lead to considerable losses for individuals at the national level. To implement effective public policy designed for scientific personnel training, it is essential to identify the influential factors and address the challenges faced by doctoral students.

Therefore, this study aims to identify the challenges in training scientific personnel in the social sciences and humanities at the doctoral level in Kazakhstan.

2. METHOD

The study employs an explanatory-sequential approach using a mixed-methods design. As part of the research, an online survey was conducted via Google Forms, utilizing both closed and open-

ended questions. The questionnaires were prepared in Kazakh and Russian. The project fieldwork was conducted from September 1 to October 15, 2023.

Five hundred questionnaires were randomly distributed among current and graduated doctoral students in social sciences and humanities from 20 national and regional universities in Kazakhstan over the past five years. Most universities are concentrated in Almaty, Astana, and Karaganda. The sample is considered representative of the regional distribution of doctoral students. Of these, 65 questionnaires were returned, with two invalid responses and 61 responses used for data analysis, compiling 12.2% of the actual response rate. The sample of respondents is relevant. Of the respondents, 47.54% had completed their Ph.D. program but had not defended their dissertation, 22.95% had defended their thesis and received their diploma, and 29.51% were still pursuing their doctoral studies.

The respondents were of three age groups: 18-29 years (19.67%), 30-39 years (62.3%), and 40-49 years (18.03%). Of these, 73.77% were female, and 26.23% were male. Regarding marital status during their doctoral studies, 14.75% were unmarried, while 68.85% were married. Nearly one-third of the respondents (31.15%) had no children during their studies, 18.03% had one child, 26.23% had two children, 16.39% had three children, and 8.2% had four or more children. Notably, 9.84% of respondents took academic leave during their studies. Half of the respondents (50.82%) pursued their doctoral studies at the same university where they completed their master's program. Most (90.16%) continued in the same specialization as their master's degree. Slightly more than half (54.10%) had a scientific background (articles, participation in scientific projects, work experience) related to their thesis topic before entering their doctoral program. However, only one-third (34.43%) chose their Ph.D. thesis topic based on this scientific background, while the majority (57.38%) based their topic on their supervisors' research background. A small percentage (6.56%) selected a topic from a list of possible topics provided by their university department. Nearly all respondents (98.36%) studied under a state educational grant. Additionally, 73.77% worked alongside their

studies. Almost a quarter of the respondents received additional income ranging from 100,000 to 200,000 tenge (~207-414 USD) during their doctoral studies. Slightly fewer respondents (22.95%) earned between 50,000 and 100,000 tenge (~104-207 USD), while 18.03% earned up to 50,000 tenge (~104 USD). A small proportion of respondents (6.56%) had additional income exceeding 400,000 tenge (~828 USD), whereas 14.75% received only a scholarship.

The study was conducted in two stages. In the first stage, regression analysis based on the OLS model was used to analyze the factors influencing the successful completion of the Ph.D. program. The following factors were used as independent variables during the doctoral studies: age (x_1), gender (x_2), marital status, (x_3), number of children, (x_4), master's education (x_5), education (x_6), status (doctoral student, graduate), (x_7), geographical location of the university (x_8), university of graduation (x_9), financial coverage of doctoral studies (grant, self-funded), (x_{10}), employment status (x_{11}), monthly income in addition to the scholarship, (x_{12}), academic leave record (x_{13}), satisfaction with the quality of Ph.D. education (x_{14}), satisfaction with the activities of university management (x_{15}) and state bodies (x_{16}) to ensure the educational process in doctoral studies, the method of choosing a Ph.D. thesis topic (x_{17}), research background (x_{18}). Two models were constructed and analyzed. The first one used the presence of a problem in doctoral studies (y_1) as the dependent variable, while the second used the level of its complexity (y_2) as the dependent variable.

In the second stage of the study, content analysis was performed on respondents' answers to closed-ended and open-ended questions to identify the difficulties and problems encountered during the Ph.D. program. It should be noted that the identified difficulties and problems were systematized according to the state-obligatory standard of postgraduate education (Order of the Minister of Science and Higher Education of the Republic of Kazakhstan, No. 2, dated July 20, 2022), based on the structure of the educational program of doctoral studies in the scientific and pedagogical direction. So, the responses were systematized and classified into critical areas of the Ph.D. program, including theoretical training, practice, direct re-

search work on the Ph.D. thesis, and final certification. An additional category, “Other,” was introduced to capture factors that did not fall into the above categories.

Data processing, analysis, and visualization were done using Eviews and Microsoft Excel software.

3. RESULTS

Of the 61 respondents, 26 partially agreed, and 11 fully agreed with “I had problems during doctoral studies,” totaling 60.7%. Ten respondents reported having no problems during their doctoral studies.

Additionally, 36.1% of respondents experienced significant or severe problems, while half encountered only minor issues and found the doctoral studies relatively straightforward (see Figure 1).

It should be noted that factors such as gender, marital status, employment status, and non-scholarship income level influenced the success of the Ph.D. program (Table 1).

The first model demonstrates that having a job made it more difficult for respondents to study and complete the Ph.D. program, as employment requires time and effort, which adds challenges. In contrast, monthly income, in addition to the schol-

Table 1. OLS regression model results

Variable	y_1		y_2	
	Coefficient	Standard Error	Coefficient	Standard Error
x_1	-0.03983	0.318659	-	-
x_2	0.177189	0.396772	0.6187**	0.4552
x_3	0.102737	0.534777	1.4251*	0.6191
x_4	-0.13205	0.19125	-0.0882	0.2119
x_5	-	-	0.0788	0.4620
x_6	0.073541	0.646463	-	-
x_7	-0.15478	0.262417	-	-
x_8	-	-	0.0961	0.1773
x_9	-0.10153	0.386288	-	-
x_{10}	-1.28162	1.444965	1.0778	1.4258
x_{11}	-1.01096**	0.516326	0.0499	0.4663
x_{12}	0.20647*	0.160599	-	-
x_{13}	-0.59758	0.628522	0.6354	0.6962
x_{14}	-	-	0.0400	0.2584
x_{15}	0.14771	0.237763	-	-
x_{16}	-0.11793	0.208421	-0.0969	0.2133
x_{17}	-	-	0.0473	0.2776
x_{18}	-0.22563	0.37839	-0.2708	0.4359

Note: *** p < 0.01, ** p < 0.05, * p < 0.1.

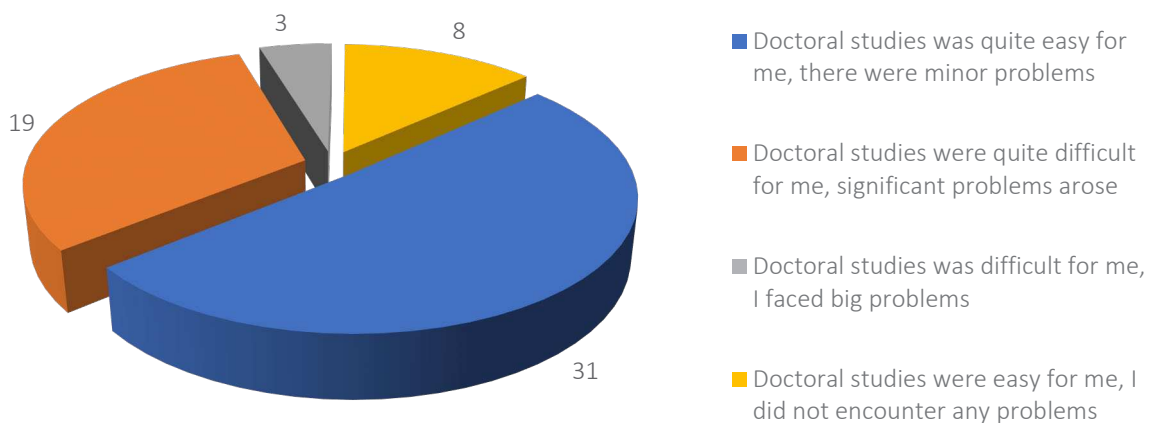


Figure 1. Perception of difficulty level in doctoral studies (% of respondents)

arship, made it more accessible, as the additional income can reduce financial stress and cover financial losses, thus aiding completion. According to the second model, women found studying easier than men. At the same time, married respondents experienced fewer challenges in their doctoral studies than single respondents, highlighting differences in the perceived ease of study based on gender and marital status.

One-third of respondents (36.1%) expressed high satisfaction with the quality of Ph.D. training. However, most respondents faced problems in the study, research, and Ph.D. thesis defense, including the inability of university management and state bodies to ensure a quality educational process. The majority of respondents stated partial satisfaction with their activities, while approximately 16% expressed dissatisfaction.

65.65% of respondents emphasized university-based problems related to the educational process – teaching research methodology, academic writing, and publication of research results. The second group of problems (formed by 52.5% of respondents) is the issues related to the scientific supervision of doctoral students – improving the qualification of supervisors, number of consulting hours, etc. One-third of respondents raised the problem of teachers’ qualifications, and a quarter of respondents referred to the acute infrastructure problems, including the availability of software and modern technologies during training (Figure 2).

It should be noted that the respondents identified the following problems as acute problems in their universities: too high percentage of elderly professors, additional courses in 2-4 semesters without linking to the Ph.D. thesis, bureaucracy (docu-

ments and reports in three languages), high workload of scientific advisors and their lack of motivation to work with doctoral students, lack of “real” science, organization of international internship and pedagogical practice.

Among the respondents, publishing articles in international scientific peer-reviewed journals indexed in the Scopus database was the most frequently mentioned obstacle. This difficulty is compounded by frequent changes in legislation affecting doctoral studies, particularly regarding publication requirements for defense. Respondents tend to focus exclusively on Scopus-indexed journals despite the possibility of publication in Web of Science database journals, which they find more challenging. Another common issue identified was the difficulty in writing the thesis, which was associated with a lack of understanding of the research methodology and the absence or inaccessibility of secondary data in Kazakhstan. Many respondents reported not receiving in-depth, practical knowledge of research methods and techniques for writing articles and theses. They criticized the educational program for being overly formal and noted that core and elective courses did not provide helpful knowledge or skills for conducting scientific research.

Respondents also highlighted the low qualifications of many teachers and the need for more to meet the requirements placed on doctoral students. They observed that pedagogical and research practices were implemented formally, resulting in a lack of practical knowledge and skills despite a high workload. Additionally, respondents mentioned facing a significant social burden due to mandatory university events, which detracted from the time available for research

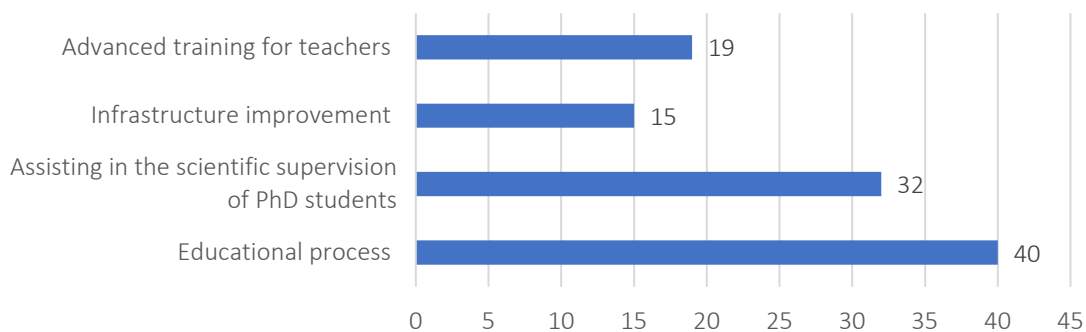


Figure 2. Identified groups of problems in Ph.D. education (by number of respondents)

and thesis writing. Some also needed help with foreign scientific internships. Identified problems were systematized according to the State obligatory standard of postgraduate education (Order of the Minister of Science and Higher Education of the Republic of Kazakhstan, No. 2, dated July 20,

2022), based on the structure of the educational program of doctoral studies in the scientific and pedagogical direction (see Table 2).

The problems associated with conducting research and writing a Ph.D. thesis are mainly due to the

Table 2. Problems encountered by respondents in the process of doctoral studies and/or defense of Ph.D. thesis

No.	Direction of the Ph.D. program		Issue
1	Theoretical training	Basic disciplines (Academic writing, Research methods)	Poor training and low quality of knowledge and skills acquired (failure to master knowledge on academic writing and research methodology; lack of research skills at the end of training; problems with the development of methodology for the Ph.D. thesis and techniques of writing scientific articles; poor training in both quantitative and qualitative research methods, modern research and analysis tools); transfer of “superficial” knowledge); low qualification of teachers (teachers’ lack of experience in writing and publishing articles in Scopus database, lack of knowledge of English); lack of qualified teachers
		Elective disciplines	Poor quality training (lack of connection between theory and practice, science and production); subjectivism, low qualification and competence of teachers (teachers are not specialists in the discipline taught); general (“outdated”) programs; absence of disciplines on the topic of the thesis and the major to be acquired; high staff turnover; large number of disciplines; poor teaching curriculum and absence of non-discipline-related tasks
2	Practice	Pedagogical	Formal conduct; lack of practical knowledge and skills; high workload
		Scientific	
3	Research work	Ph.D. thesis writing	The new direction of Ph.D. research (lack of scientific background, insufficient time for scientific research); selection and approval of the research topic (no proper attention from supervisors and department); lack of understanding of what to write about; inaccessibility and lack of materials, including data on Kazakhstan (statistical data, literature); lack of field research funding; lack of time to conduct research and write a thesis (family commitments, work, social load at the university, mandatory participation in university events, duty at the department, etc.); difficulties with model building and data processing; low interest and motivation in conducting the study; lack of a precise algorithm for research work
		Working with supervisors	No or few counseling sessions and hours of close work; changing supervisors and redesigning the research to fit the new supervisor’s vision; choice of supervisor (appointment by the department, etc.); conflict with supervisor (pressure, biased remarks, etc.); assignments from the supervisor not related to the Ph.D. thesis; lack of support and assistance; supervisor’s low competence (lack of experience in publishing articles in the Scopus database, lack of experts in the student’s major and thesis topic); difficulties in finding a foreign supervisor; lack of joint work with both supervisors; low interest and motivation on the part of supervisors to work with the doctoral student
		International internship	Low availability; shortened terms of foreign scientific internship or its absence.
		Publication of research results	Difficulties due to independent preparation, writing, and publication of articles in general; lack of knowledge in searching articles and journals in the Scopus database; inadequacy of three years to conduct research and publish its results; very high requirements” and frequent changes in publication requirements for admission to defense
4	Final certification (state examination, thesis defense)		Absence and untimely publication in a journal indexed in the Scopus database; frequent changes in the legislation on doctoral studies (awarding the degree, requirements for supervisors and dissertation council members, etc.); conflicts, including conflicts of interest between the supervisor and the department/dissertation council leadership; delay in admission to defense; failure to prepare the Ph.D. thesis on time
5	Others		Bureaucracy, corruption, personal problems (lack of housing, low income, family commitments, etc.), deteriorating health (psychological problems, stress, irritability, dependence on technology (laptop, telephone), etc.), outdated facilities (lack of offices and special workstations for doctoral students, poor technical support, lack of access to foreign databases, etc.), involvement in community service at the university, insufficient scholarship coverage and financial losses

difficulties encountered in research work, including working with supervisors. For example, a good working relationship with both supervisors would contribute to high-quality research and a timely defense. However, the respondents need more consultations and work with supervisors, and they lack of collaboration, assistance, and support. In most cases, students need help to independently choose a domestic supervisor or find a foreign one whose research background aligns with the Ph.D. thesis topic. Sometimes, there are conflicts with one of the supervisors. As a result, doctoral students need to help with thesis writing and publication of research results.

The complexity of these factors affects the success of completing the Ph.D. educational program among social sciences and humanities students. One of the significant factors affecting the Ph.D. training was the public policy on awarding academic degrees in the country, especially the requirement to publish in an international scientific peer-reviewed journal indexed in Scopus or Web of Science databases for admission to Ph.D. thesis defense and frequent changes in the requirements for these publications.

Additionally, having a job complicates studying and completing a Ph.D. program, whereas having additional non-scholarship income during doctoral studies makes it more accessible. A gender-based comparison indicates that women generally find it easier to meet academic demands than men. A marital status comparison reveals that married doctoral students encounter fewer challenges in their studies than their single counterparts. Some issues encountered during Ph.D. training can lead to further complications, eventually affecting the Ph.D. thesis defense. This suggests that a problem perceived as minor by one individual may be significant to another. Over a third of respondents experienced significant or severe problems during their doctoral studies, while half encountered only minor issues.

Among the most pressing problems that need to be addressed in universities are deficiencies in the educational process, such as poor-quality teaching, inadequate training in research methodology, academic writing, and insufficiently qualified instructors. These issues impact the success and

timely defense of Ph.D. theses. Additionally, delays in Ph.D. thesis defense are often attributed to insufficient support and guidance from supervisors, particularly in the early stages of research, a lack of available experts, and limited time for conducting research and writing the thesis.

The survey indicates that the Ph.D. educational process has notable shortcomings despite existing public policies. Measures are needed to enhance the quality of Ph.D. education to address these issues.

4. DISCUSSION

Gender is a significant predictor in the regression, with women demonstrating higher completion rates. Several literature-based sources are in line with these findings. For instance, in Turkey, women are more persistent in their Ph.D. endeavors (Ertem & Gokalp, 2022). Therefore, additional contextual factors may be used for further clarification. In the Kazakhstani context, several possible explanations exist for women achieving higher completion rates. Firstly, traditionally, men are family providers in Central Asian countries; therefore, women may focus on Ph.D. programs with less pressure to obtain additional sources of income than those met by men. Another explanation is that trends may be relevant only to the social sciences. For instance, Posselt et al. (2018) emphasize that more men earn Ph.D. in STEM programs. According to Mogaji et al. (2021), male married students with employed partners who managed household and childcare duties were found to concentrate on their Ph.D. research. Conversely, female students faced challenges juggling their responsibilities as wives, mothers, and students. However, married students or those in relationships are more likely to finish their Ph.D.s within eight years (Wollast et al., 2018). Married students had lower attrition rates than their unmarried counterparts, likely due to the external motivation to complete their degrees, which promotes higher retention and completion rates (Lott et al., 2009). Another significant challenge doctoral students face is balancing their studies with employment, mainly when the work is outside the academic university setting (Castello et al., 2017). Students engaged in full-time off-campus work

are the most vulnerable group regarding their academic progress. These students are generally less focused on their studies and need help balancing work and study. Consequently, they have a reduced likelihood of successfully defending their theses. The combination of study and external work adversely affects the probability of thesis defense, thus contributing to higher dropout rates. However, an exception exists for those in research positions within the university, as doctoral students employed on campus enjoy more advantages during their studies (Bekova, 2021).

The study showed that government policy, especially in awarding academic degrees, affects the level of protection in the country, which coincides with the conclusions of Kuzhabekova and Ruby (2018). The results of this study confirm the conclusions of Geraghty and Oliver (2018), van Rooij et al. (2021), and van Tienoven et al. (2022) that working with a scientific consultant is the most significant factor in the successful completion of a Ph.D. program, along with the quality of the educational process. According to Yessimova and Yergaliyev (2023), in Kazakhstan, Ph.D. programs are characterized by an insufficient number of subjects that help develop research skills. Training and development practices play an important role in improving the research productivity of academic staff. In particular, in non-English-speaking and developing countries such as Kazakhstan, doctoral students and current scientists may need additional training and re-training in research skills to fully join the global scientific community (Kozhakhmet et al., 2020).

To boost Ph.D. defense rates and solve the problems of training scientific personnel in the social sciences and humanities identified by the respondents, the following measures at admission and during doctoral studies are proposed:

1. To amend the requirement in Model rules of admission to study in educational organizations implementing educational programs of higher and postgraduate education (Order of the Minister of Education and Science of the Republic of Kazakhstan, No. 600, October 31, 2018) for work experience from “at least 9 months” to “3 years of academic or pedagogical experience, or experience in a field related to the proposed research topic. For individuals

who have completed a master’s program with a GPA of 4.0, the work experience requirement shall not apply, provided that the proposed research continues the theme of the master’s thesis,” and to add a mandatory requirement for applicants to have published research articles, including on the proposed research topic. The “list of scientific publications for the last three calendar years” must be mandatory. According to Gasskov (2018), high-skilled jobs typically require 1-2 years of formal training, while technician qualifications demand over 3 years. This measure will help ensure that applicants have both practical experience and scientific background on the studied problem, ultimately increasing the likelihood of completing doctoral programs and defending a Ph.D. thesis on time.

2. To prohibit doctoral students studying under the state educational order from being employed during their studies, except in cases where they are employed in a research institute or a grant- or program-targeted research project related to their Ph.D. thesis. This requirement should be monitored by checking the pension contributions of grant-funded doctoral students at the end of each academic year. If such employment is identified, the student shall lose their grant and be required to repay the state funds. Under the state educational order, doctoral students receive a monthly stipend of 217,500 tenge (~451 USD), (Government Decree of the Republic of Kazakhstan, No 116, February 7, 2008). An annual 20% increase in the stipend is planned, with a target of 500,000 tenge (~1035 USD) over the next 4-5 years (Qaz365, 2023). According to data from 2023, the average monthly salary in the field of “Research and Development” was 311,489 tenge (~645 USD) (BNS, 2023b). Therefore, doctoral students currently receive a stipend comparable to senior and leading researchers’ salaries. According to subparagraph 2, paragraph 4, Article 47 of the Law of the Republic of Kazakhstan “On Education,” students have the right to “combine studies with work during their free time.” However, subparagraph 10, paragraph 7, Article 47 states that “students and trainees shall not be distracted from the educational process.” This measure will help ensure that doctoral stu-

dents have enough time for their research, ultimately increasing the likelihood of completing doctoral programs and defending a Ph.D. thesis on time.

3. To increase the requirements for scientific supervisors and their responsibility for the timely thesis defense of a thesis. Priority should be given to appointing supervisors to employees of research institutes and those who have research projects, with the possibility of including the student in the research group. This measure will help ensure that doctoral students gain research experience from a practitioner and highly qualified specialist and enhance their research skills through the principle of learning by doing, which will ultimately increase the likelihood of completing doctoral programs and defending a Ph.D. thesis on time.
4. To enable the option to replace one publication in an international peer-reviewed journal in Scopus/Web of Science databases with several

publications in domestic journals recommended by the authorized body. For example, according to paragraph 6 of the Rules for awarding degrees (Order of the Minister of Education and Science of the Republic of Kazakhstan, No. 127, March 31, 2011), “the presence of scientific articles in international peer-reviewed journals allows 1 article in such a journal to be counted as equivalent to 2 articles in publications recommended by the authorized body.” This measure will facilitate admission to the Ph.D. thesis defense of students who have completed their doctoral studies but did not defend it due to the lack of publication in the journal in Scopus/Web of Science databases.

The implementation of the proposed measures will contribute to the recruitment of students with high potential for research activities, obtaining practical knowledge and skills helpful in conducting research and publishing its results, and increasing the level of education not only in the socio-humanities but also in other fields of science.

CONCLUSION

This study investigated the reasons for Kazakhstan’s low Ph.D. thesis defense, particularly in the social sciences and humanities. The study identified the challenges of scientific personnel training at the doctoral level. The following conclusions can be drawn based on the results of the study.

Firstly, successful completion of the Ph.D. program is conditioned by internal and external factors that may lead to difficulties in studying, conducting research, writing a Ph.D. thesis, or publishing the results of research. The internal factors include gender, age, marital status, educational background, academic performance, research competencies, motivation, and financial situation of doctoral students. External factors include supervision of doctoral students, faculty competencies and support, structure and policy of Ph.D. programs, research infrastructure, and environment. Among the surveyed students and graduates of socio-humanities doctoral studies in Kazakhstan, such factors are gender, marital status, employment status, and additional income. Another critical factor influencing Ph.D. program success is public policy governing doctoral education, particularly the regulations on awarding degrees.

Secondly, the low level of Ph.D. thesis defense in the social sciences and humanities in Kazakhstani universities is closely linked to doctoral students’ challenges during their studies and research defense. These challenges include difficulties in writing and publishing articles in international peer-reviewed journals and issues with the Ph.D. thesis itself, often stemming from a lack of understanding of research methodologies and the absence or inaccessibility of necessary data. Many respondents reported not receiving needed comprehensive, practical training in research methods and techniques for writing research articles and their thesis. Additionally, needed help in establishing effective relationships with their supervisors. The quality of the training process could have been better, compounded by issues such as bureaucracy, corruption, additional financial burdens, breaches of research ethics, stereotyping, disrespectful attitudes, and personal problems.

Thirdly, to increase the level of Ph.D. thesis defense in social sciences and humanities, state bodies and management of universities in Kazakhstan should take measures to strengthen the requirements for applicants, giving priority to applicants with experience and scientific background on the topic of the proposed research, a ban on employment during doctoral studies for students studying at the state grants, except research institutes, to increase the requirements for supervisors and their responsibility for timely protection, to provide the opportunity to replace an international journal with several domestic ones. These changes aim to ensure doctoral students gain relevant experience and focus on research, thereby boosting timely thesis defense.

This study contributes to the current literature by providing insights into the Kazakhstani Ph.D. education system. It covers the research literature gap, with the main emphasis on three actors: the student, academic faculty, and supervisor. Findings provide evidence that the government is the fourth contributing actor and that public administration measures in education have a meaningful impact on Ph.D. dropout levels.

CONFLICT OF INTEREST STATEMENT

Authors reported no conflict of interest.

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