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# The development of research competence in postgraduate foreign language students using project-based methods

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## Key words

*foreign language teachers*

*research competence*

*project-based methods*

*postgraduate foreign language students*

*questionnaire*

## Abstract

This article is aimed at evaluating the effectiveness of developing research competence in postgraduate foreign language students, enhancing their scientific and research skills, enabling independent problem-solving in their professional field, and improving their academic training through project-based methods. Today's educational paradigm puts students themselves at the centre of the educational process, their needs, characteristics and talents and their development; the need for a teacher to master research competence is obvious. One of the most effective ways to form specialists with creative thinking is to involve postgraduate foreign language students in research activities. With research competence, a specialist is able to actively and productively analyse evidence, and develop and apply new, more efficient algorithms, resources and technologies, instead of being limited to using ready-made, sometimes outdated solutions. The authors of this study highlight that while postgraduate foreign language students understand the concept, goals, and objectives of research, they often lack the motivation and skills required for independent work, information analysis, and research competence development. To address this challenge, research competence must be systematically cultivated from the early stages of postgraduate education. A well-structured educational environment is essential for developing students' research skills. The study, conducted at the Kazakh Ablai Khan University of International Relations and World Languages, used surveys and pedagogical observation to assess the research competence levels of master's degree students. The findings emphasize the importance of targeted instructional strategies in fostering research competence, ensuring that by graduation, students possess the necessary skills for conducting independent research effectively.

## 1. Introduction

In the modern world, there are increased demands regarding the quality of professional training of specialists in all spheres of life. In connection with the expansion of economic,

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political and educational relations of the Republic of Kazakhstan with other countries, and the entry of the Republic of Kazakhstan into the global educational space, the state faces the task of training specialists of a new calibre, capable of navigating and being in demand in the international labour market. To solve this problem, it is necessary to search for various ways to form and develop a creative personality, researcher, analyst, expert in their field.

The modern school needs professionally trained teachers. In this regard, the main task of higher education is to prepare a new generation of teachers and researchers focused on innovative activities. Educational organizations need to define the main goal of training in the preparation of future foreign language teachers: to prepare such a teacher – a specialist who has creative work skills, scientific research methodology, capable of self-education, a teacher who expands his horizons and improves methodological skills. In this sense, the system of professional education should be aimed at the formation of a teacher-researcher. Bim (2002) notes that there is a change in value orientations, and at present the greatest value is represented by "a free, developed personality, capable of living and creating in a constantly changing world" (Bim, 2002).

The purpose of this study is to determine the effectiveness of developing research competence in postgraduate foreign language students, which contributes to the deepening of scientific and research skills, independent solution of professional problems and improvement of the level of academic training through project-based methods.

The main goal of a higher educational institution in training postgraduate students is the development of their in-depth specialization in a certain professional field. The master's degree is of key importance in the formation of a professional researcher, helping postgraduate students to approach the implementation of dissertation research. In this aspect, research activity acquires special significance for postgraduate students of pedagogical universities.

Research competence includes theoretical training, the ability to apply methods of psychological and pedagogical research, analyse empirical data, formulate conclusions and present the results of the work. From the point of view of the process-technological approach, according to Khutorskoy, this competence covers knowledge that is formed as a result of cognitive activity in a certain scientific field, methods and techniques necessary for conducting research, as well as motivation, research position and value orientations of the individual (Khutorskoy, 2003).

Mogonea and Mogonea highlight key research competencies, including the ability to acquire new knowledge, recognize educational challenges, synthesize information, justify conclusions, apply metacognitive strategies, utilize modern research methods, design research tools, and effectively interpret and share research findings (Mogonea, F. & Mogonea, F.R., 2019).

According to Zetina et al. (2017), developing effective strategies to enhance research competencies plays a crucial role in preparing highly skilled young researchers (Walton & Cleland, 2017).

Isolda Margarita Castillo and Maria-Soledad Ramirez-Montoya (2021) explore research competencies through innovative approaches to fostering academic literacy in higher education using contemporary teaching models. They propose that cultivating these competencies will help university students enhance their research abilities, efficiently navigate various information sources and platforms, comprehend specialized texts within their field, and produce high-quality, publishable materials (Castillo & Ramirez-Montoya, 2021).

Based on the analysis of various researchers' perspectives, it is evident that developing research competence is essential for young researchers as they explore, analyse, and share their findings. This article aims to assess the importance of project-based methods in fostering research competence among postgraduate foreign language students and to present the results obtained during their teaching practice.

## 2. Theoretical background

### 2.1 Literature review

Research competence encompasses a range of skills, including the ability to conduct literature reviews, design research methodologies, analyse data, and communicate findings effectively. Few studies have been carried out on the research competence of students at higher educational institutions in various majors and degrees.

Scholars such as Gess et al. emphasized the significance, and development of research competence in the social sciences. In the social sciences, the importance of research competence is connected with the knowledge of what social research is, publication rules, and quality standards (Gess et al., 2018).

Munthe and Rogne in their research highlighted that research competence in education sciences must be acquired during undergraduate degree level at university. Their claim is connected with the idea that acquisition of the competence was complicated by the assumption that it is developed implicitly in the various subjects, without a clearly agreed plan within the faculty itself and in line with other universities (Munthe & Rogne, 2015).

As noted in various studies, including those by Akgün & Güntaş & Özkara, developing these competencies is essential for postgraduate students to succeed in academic and professional environments (Akgün & Güntaş, 2018).

Abdulai and Owusu-Ansah (2014) state that students studying at both undergraduate and postgraduate levels in universities need to conduct research and submit a thesis or dissertation as part of the academic requirements of their degrees. Therefore, conducting research is a particularly important part of completing education and training at the postgraduate level.

Research competencies can be described as a combination of research methodologies, statistical analysis, evaluation techniques, and computer proficiency. In other words, they are the skills/competencies required for each stage of the research process.

Bayona-Ore (2021) states that a specific research course is needed in order to gain these skills/competencies, providing training in writing a dissertation and improving the presentation skills of graduate students. As Toy and Tosunoğlu (2007) point out, the main reason for errors in scientific articles is that the scientific research process is not sufficiently known.

Ormancı considers developing research competence via the examination of theoretical and practical information when conducting a literature review and the impact of this training on the research skills of graduate students (Ormancı, 2023).

Dominguez and Judikis conducted a study at Mexico University examining how blended learning contributes to developing research competence in university students. The research outlined the essential knowledge, skills, and values required for research competence. Key components included scientific, technical, and methodological knowledge; proper grammar, punctuation, and spelling; the ability to identify and formulate research problems; effective time management for research planning; formulating scientific hypotheses; developing communication and academic skills; setting goals and objectives; and managing research processes (Dominguez & Judikis 2016).

Afolabi et al. examined the research competence of 161 postgraduate students in library schools in South-West Nigeria. Using frequency distribution tables and percentages to analyse the data, the study found that postgraduate students in the region demonstrated a high level of research competence. The findings emphasize the importance of research knowledge, skills, and a positive attitude in building this competence. The study also highlights the students' recognition of the need to further enhance their research abilities by fostering a positive mindset and avoiding negative attitudes that could hinder their interest and progress in research (Afolabi & Aragbaye, 2022).

Another issue to be resolved is "why" this research competence is necessary in these degrees (Salmento et al., 2021).

Developing research competence in postgraduate students is a key objective in higher educational institutions, especially for those aiming for advanced academic or professional careers. This competence encompasses theoretical understanding, methodological expertise, critical thinking, creativity, and the capacity to carry out independent research.

According to The European Competence Framework for Researchers (ResearchComp) developed by Capezzuto, the research competence involves seven competence areas including 38 competences. All competences are equally important and interrelated, could be developed via training, on-the-job-training, peer-to-peer learning, coaching and mentoring (Dario, 2022).

Figure 1 demonstrates the seven areas of research competence:


*Figure 1*. The areas of research competence

Each area comprises the following competences:

- Managing research:
- Mobilize resources;
- Manage projects;
- Negotiate;
- Evaluate research;
- Promote open access publications.
- Making an impact:
- Participate in publication process;
- Disseminate results to the research community;
- Teach in academic or vocational contexts;
- Communicate to the broad public;
- Increase impact of science on policy and society;
- Promote open innovation;
- Promote the transfer of knowledge.
- Self-management:
- Manage personal professional development;
- Show entrepreneurial spirit;
- Plan self-organization;
- Cope with pressure.
- Cognitive abilities:
- Abstract thinking;
- Critical thinking;
- Analytical thinking;
- Strategic thinking;
- Systemic thinking;
- Problem solving;
- Creativity.
- Working with others:
- Interact professionally;
- Develop networks;
- Work in teams;
- Ensure wellbeing at work;
- Build mentor-mentee relationships;

– Promote inclusion and diversity.
– Managing research tools:
– Manage research data;
– Promote citizen science;
– Manage intellectual property rights;
– Operate open - source software.
– Doing research:
– Have disciplinary expertise;
– Perform scientific research;
– Conduct interdisciplinary research;
– Write research documents;
– Apply research ethics and integrity principles (Dario, 2022).

Referring to the European Competence Framework for Researchers and the study results designed by various scholars we can draw up the components of research competence as the **motivational component, cognitive component, process-focused component, reflective and communicative components**.

## 2.2 Research competence components

**The motivational component** encompasses the core desire to engage in research activities, characterized by interest and professional desire to solve complex problems. A strong motivational foundation encourages students to track knowledge and innovation in their fields.

**The cognitive component** comprises the theoretical knowledge for conducting research, such as understanding research methodologies and the ability to critically evaluate existing literature. Cognitive skills also include the ability to think abstractly, problem-solving, and engage in analytical reasoning.

**The process-focused component** refers to the practical skills required to perform research tasks effectively in the process which includes the ability to formulate research questions, collect and analyse data, and present findings.

**The reflective component** is crucial in the educational process for assessing one's own research processes and outcomes. It involves evaluating the effectiveness of used methods, understanding the inferences of results, and making alterations based on feedback or new information.

**The communicative component** is vital for disseminating research findings to various audiences and for working in teams with peers. Moreover, this component could include writing scientific articles via presenting at conferences, and engaging with both academic and non-academic participants. In the case of postgraduate foreign language students, it could be focused on presenting research results in front of other students.

Equally, we believe that when it comes to future foreign language teachers, research competence should be one of the mainstays of university postgraduate education. We consider that the motivational, cognitive, process-focused, reflective and communicative skills must be implemented in doing research.

The purpose of studying research competence was to identify and emphasize aspects both within and beyond the curriculum that enhance research abilities and to evaluate their effectiveness qualitatively. The use of project-based methods has gained prominence as an effective pedagogical approach for achieving this objective.

Considering this, we implemented a project-based method in order to identify the research competence in the curriculum and regulatory documents approved at the university for training master's degree students in Foreign Language Training.

The project-based learning (PBL) method is an effective educational approach for developing research competence among graduate students. This method emphasizes active learning through the accomplishment of projects that are connected to real-world problems, adopting critical skills necessary for research. Bell defines project-based learning (PBL) as "a student-driven, teacher-facilitated approach to learning" (Bell, 2010).

Further, PBL helps instructors in developing students' collaboration skills, enhancement of critical and creative thinking, complex problem solving, transfer of learning, and positive attitudes towards tasks (Lee, Huh & Reigeluth, 2015).

Garcia and Perez (2018) and Fajardo and Gil point out that project-based learning develops social competences via teams with various profiles to carry out projects and provide solutions to real problems (García & Pérez, 2018).

As it can be noticed the role of PBL in the educational system is vital for developing students' communication and collaboration skills. Equally, while students collaborate to achieve common goals in a project, they develop skills such as expressing their ideas, considering different viewpoints, and managing group dynamics. These competencies are essential for fostering strong relationships in succeeding in team-oriented professional surroundings.

As the purpose of the study is connected to foreign language teachers, the project titles are highly relevant to postgraduate students addressing real-world problems or challenges which could be faced by students in their professional career.

Hence, for postgraduate students to engage effectively in the research process, selecting a research topic, conducting literature reviews, formulating objectives and research questions, organizing and analysing data in solving the problem, and disseminating findings are essential in developing research competence. Additionally, fostering a positive attitude towards research with specific attention to training foreign language teachers via PBL is essential to enhance their overall research competence.

## 3. Material and methods

Project-based methods are a powerful and effective approach to fostering research competence among postgraduate foreign language students. These methods are designed to immerse

students in real-world research challenges, promoting deeper learning, critical thinking, and the development of practical skills.

Postgraduate foreign language students can choose from a variety of research methods depending on their discipline, objectives, and the nature of their research problem. The most important part is selecting the method that best aligns with the research question and context. Researchers should also be flexible and open to combining methods, especially in complex research areas, to enhance the validity and reliability of their findings (Hosler, 2013).

Firstly, we can identify qualitative research methods, which focus on understanding phenomena in depth, exploring meanings, and gaining insights on the topic. Common qualitative research methods applied for project works of postgraduate foreign language students include:

1. Case studies: a case study explores a particular instance, event, or phenomenon in detail, often within its real-life context. This method is used to investigate unique or rare cases and to understand complex issues that can't be generalized easily.
2. Interviews: in-depth, one-on-one discussions with participants to gather detailed information on their experiences, thoughts, and opinions. Interviews can be structured (with fixed questions); semi-structured (with open-ended questions); or unstructured (free-flowing).
3. Focus groups: a group discussion involving multiple participants to explore their attitudes, perceptions, or ideas about a specific topic. Useful when studying application of certain linguistic concepts.
4. Ethnography: the researcher immerses themselves in the community or context being studied to observe behaviours and interactions in their natural setting (e.g., collection of folklore).
5. Content analysis: analysing textual, visual, or audio content to identify patterns, themes, or meanings. It is used to analyse media, books, interviews, and other textual data researching linguistic topics.
6. Narrative analysis: analysing stories to understand how individuals make sense of their experiences on certain linguistic terminology.

The following set of methods can be grouped as quantitative research methods that focus on generating numerical data and using statistical methods to test hypotheses and draw conclusions. Common quantitative methods may include:

1. Surveys and questionnaires: to gather large-scale data on opinions, attitudes, or behaviors from a sample of participants. Postgraduate foreign language students are asked to fill in a questionnaire in order to test their perception of the project work and the learners' preferences in comparison with other forms of teaching.

2. Experiments: conducting controlled experiments to test hypotheses under specific conditions and measure cause-effect relationships. The projects themselves and the determined learning outcomes take the form of experiment with one experimental and one control group. The experimental group is provided with the project-based approach, while the control group is offered a more traditional teaching approach. By comparing these methods the postgraduate students identify appropriate data for a research work.
3. Data collection and analysis: projects often require postgraduate foreign language students to collect original data – whether through fieldwork, experiments, surveys, or corpus linguistics. This hands-on experience helps students build essential data collection and analysis skills. They learn how to select appropriate research methods, design surveys, conduct interviews, or perform statistical analyses (Korman, 2021).

While compiling this research paper, we applied several methods that directly impacted on how we collect, analyse, and interpret data. Each research method serves a distinct purpose and is applied according to the nature of the research question, the type of data we are working with, and the goals of our study.

The *diagnostic* method plays an essential role in research, especially when the goal is to identify, understand, and analyse specific problems, conditions, or causes of a phenomenon. In this research work, the diagnostic method was used to uncover underlying issues concerning mastery of research skills. This method is particularly effective in pinpointing causes and providing solutions or interventions.

The *questionnaire* method is typically used to collect data from a large number of people, often through a structured set of questions, which can be closed-ended (e.g., yes/no, multiple choice) or open-ended (requiring detailed responses). In this research work a questionnaire was applied to collect data of 71 master's degree students studying on the educational programme "Training of Foreign Language Teachers". The survey was conducted to define the level of mastery of research skills, where master students express their attitude concerning agreement/disagreement with a set of questions describing the procedure of conducting the research work.

The *statistical* method plays a crucial role in conducting research, especially in quantitative studies, as it helps researchers analyse data, test hypotheses, and draw meaningful conclusions. Statistical methods allow researchers to objectively measure relationships between variables, identify patterns, and determine the significance of their findings. In our research work we applied the statistical method to summarize and describe the percentage of the master students. In addition, statistical methods helped us determine whether the observed results are statistically significant, meaning they are unlikely to have occurred by chance. The use of statistical methods allows researchers to make objective, data-driven

decisions. Without statistical analysis, researchers might be swayed by personal bias or subjective interpretation.

The *analytical* method plays a central role in conducting research, particularly in fields where understanding relationships, structures, patterns, or behaviors is crucial. This method involves breaking down complex information, processes, or phenomena into smaller, more manageable components in order to examine, interpret, and understand them in greater depth. In research, it is applied to both qualitative and quantitative data to derive insights, answer research questions, and make informed conclusions. In our research work we applied the analytical method that allowed us to deconstruct large, complex datasets or concepts into smaller, simpler parts that are easier to understand and interpret.

Project-based works will be assessed using the following criteria:

1. *novelty of the work:*
– relevance of the research topic;
– novelty and independence in the formulation of the topic, formulation of a new aspect of a known problem in establishing new connections (interdisciplinary, intradisciplinary, integration);
– ability to work with research, critical literature, systematize and structure the material;

presence of the author's position, independence of assessments and judgments;
stylistic unity of the text.

2 *justification for the choice of source:*
– assessment of the literature used: whether the most well-known works on the research topic included (including monographs, dissertations, journal publications of recent years, the latest statistical data, summaries, references, etc.).

3. *degree of disclosure of the essence of the issue:*
– the plan's compliance with the project's topic;
– the content's compliance with the project's topic and plan;
– the completeness and depth of knowledge on the topic;
– the validity of the methods and techniques for working with the material;
– the ability to generalize, draw conclusions, and compare different points of view on one issue.

4. *compliance with design requirements:*
– how correctly the references to the literature used, the list of references is formatted;
– assessment of literacy and presentation culture (including spelling, punctuation, stylistic culture), mastery of terminology;
– compliance with the requirements for the volume of the project (10–12 pages) (Table 1).

According to the methodical recommendations of the Kazakh Ablai Khan University of International Relations and World Languages, the research works of master's students are assessed as follows:

"Excellent" – if the work is submitted within the specified deadlines, the issue is identified and its relevance is justified, a brief analysis of various points of view on the issue under consideration is made, one's own position is logically stated, conclusions are formulated, the topic of the project is disclosed, the volume is maintained, the requirements for external design are met;

"Good" – the main requirements for the project are met, but at the same time shortcomings are made, for example, there are inaccuracies in the presentation of the material.

"Satisfactory" – there is no logical consistency in judgments, the volume of the project is maintained by more than 50%, there are omissions in the design;

"Unsatisfactory" – the topic is not disclosed, a significant misunderstanding of the problem is revealed, and gross errors are available in the design of the work.

*Table 1.* Assessment parameters (Point-rating system of assessment)

| **In letters** | **Digital equivalent of points** | **Percentage** | **Traditional assessment system** |
|---|---|---|---|
| A | 4.0 | 95–100 | Excellent |
| A- | 3.67 | 90–94 | |
| B + | 3.33 | 85–89 | Good |
| B | 3.0 | 80–84 | |
| B- | 2.67 | 70–79 | |
| C | 2.0 | 65–69 | Satisfactory |
| C- | 1.67 | 60–64 | |
| D + | 1.33 | 55–59 | |
| D | 1.0 | 50–54 | |
| F | 0 | 0–49 | Unsatisfactory |

To facilitate the implementation of project-based assessments, professors at the Kazakh Ablai Khan University of International Relations and World Languages have developed comprehensive methodological guidelines for postgraduate foreign language students. These guidelines outline the procedures for organizing and conducting a practice-oriented examination in the form of a project defence.

The project-based examination represents a form of research activity designed to prepare postgraduate foreign language students for their final thesis defence, as well as for various academic and professional practices, including research, scientific inquiry, and pedagogy. The final examination takes the form of thematic project defenses within specialized disciplines, tailored to the individual academic plans of postgraduate foreign language students and aligned with the curricular programmes. These projects are intended to address contemporary issues in communication theory, linguistics, foreign philology, and foreign language education methodology. The topics are developed collaboratively by the graduate departments and applied research schools of Ablai Khan University and are aligned with the postgraduate foreign language students' thesis research areas.

Upon completion of the project, postgraduate foreign language students are expected to demonstrate the following competencies:

- research and forecasting competence;
- predictive and analytical professional competence;
- research and applied competence.

There are some basic requirements for a postgraduate foreign language students' project activity:

- The presence of a significant problem/task that requires integrated knowledge and research to solve it. So, the project must be problem-oriented.
- The theoretical and practical significance of the expected results.
- Structuring the substantive part of the project (indicating the step-by-step results).
- The results of the projects should be, if it is a theoretical problem, then a specific solution; if practical, a specific result ready for implementation, or both.
- The content of the research project is based on the teaching materials of the disciplines.
- The number of project topics depends on the number of students and the number of credits allocated per module.

After choosing a topic, type of project, and understanding the purpose, postgraduate foreign language students' activities are aimed at selecting and analytically studying scientific and analytical literature on the project topic. The work with literary sources ends with a general assessment of the state of development of the project topic and the identification of the contradiction that causes the problem.

At the next stage of the project work, the problem is clarified, actions are planned to solve it, techniques and methods of solving the problem are determined, and tasks are specified. The expected result (product) is designed depending on the tasks being solved, interviews, conversations, questionnaires, etc. can be conducted. The task of the last stage of the project

work is to make a specific decision (the process of generating new ideas is underway), to argue the decision being made, and to predict the possible consequences in case of acceptance or rejection of this decision.

From 1 to 3 postgraduate foreign language students can participate in the development of one project. In the process of working on the project, the postgraduate foreign language students, under the supervision of the supervisor, plan their activities according to the stages and deadlines for their completion.

1. Preparation (topic selection)
2. Planning
   – definition of the purpose and objectives of the work,
   – identification of sources of information and literature,
   – identification of ways to collect and analyse information,
   – definition of the way results are presented (report form)
3. Search and study of literature
4. Research

   The main tools at this stage are interviews, surveys, observations, and experiments. Analysis of information, formulation of conclusions.
5. Completing the work and submitting it to the supervisor for review.
6. Preparation of the final version of the project in accordance with the requirements imposed on it, preparation of a report on it for defence.

Thus, the project involves the following stages:

**Theoretical Component:**

Stage 1: Selection of the Project Topic

The first stage involves determining a project topic aligned with the postgraduate foreign language student's research focus. This includes a justification of the topic's relevance and an articulation of its scientific novelty.

Stage 2: Formulation of the Research Aim and Objectives

At this stage, the student defines the purpose and objectives of the project, as well as its object and subject of study. A research hypothesis should also be formulated.

Stage 3: Identification of Research Methods

Drawing on a review of relevant scholarly literature, the student outlines the principal research methods to be employed throughout the project.

Stage 4: Compilation of a Bibliography

A comprehensive bibliography is compiled, including scientific works by both domestic and international scholars that pertain to the project topic and related fields.

Stage 5: Conceptual Framework Development

Through the analysis of the reviewed literature, the student identifies and refines the key concepts relevant to the study. This stage culminates in the formation of the project's conceptual and terminological framework.

Stage 6: Analysis of Theoretical Perspectives

The postgraduate foreign language student examines and synthesizes domestic and foreign theoretical contributions in the field of study, providing a critical literature review on the selected topic.

Stage 7: Establishment of Theoretical Foundations

The postgraduate foreign language student identifies the theoretical framework that best aligns with his/her research objectives and personal scholarly perspective. Justification for the chosen conceptual approach is provided through well-reasoned argumentation.

**Practical Component:**

Stage 1: Determination and Collection of Empirical Data

Criteria for selecting empirical material are established, followed by the collection of relevant data. A structured database of empirical sources is created to support project implementation.

Stage 2: Classification of Empirical Data

Collected data are classified according to the defined criteria. The classification process is described in detail to ensure methodological transparency.

Stage 3: Analysis of Empirical Material

The postgraduate foreign language student conducts a comprehensive analysis of the data using the selected theoretical framework and appropriate research methods.

Stage 4: Interpretation and Synthesis of Findings

Results of the analysis are summarized, and conclusions are drawn. These conclusions must directly correspond to the study's initial aims and objectives.

Stage 5: Evaluation of the Hypothesis

The postgraduate foreign language student evaluates the validity and relevance of the research hypothesis, providing substantiating evidence to either support or refute it.

Stage 6: Development of Applied Materials

Based on the findings, the postgraduate foreign language student develops applied outputs such as educational or methodological materials, scholarly articles, lesson plans, analytical reports, or instructional guidelines.

Stage 7: Preparation of the Project Presentation

A comprehensive presentation is prepared, reflecting the key stages of the research process, as well as its theoretical and practical outcomes.

Stage 8: Project Defence

**Assessment Criteria for Project Work:**

The conceptualization of the project work as a coherent, original authorial text underpins the criteria used for its evaluation. The following key dimensions are considered:

1. Novelty of the Text
- Relevance of the research topic: the extent to which the topic addresses current issues or gaps in the field.
- Originality and independence in problem formulation: the ability to introduce a new perspective on an existing issue or to establish novel connections (e.g., interdisciplinary, intra-disciplinary, or integrative approaches).
- Analytical and critical engagement with scholarly literature: demonstrated capacity to engage with, systematize, and structure research and critical materials effectively.
- Authorial voice: evidence of an individual position, critical thinking, and independence of judgement.
- Stylistic consistency: adherence to a unified academic style throughout the text.

2. Depth of Issue Exploration
- Alignment between the project plan and topic: logical consistency and relevance of the structure to the stated topic.
- Content coherence: correspondence between the content, topic, and outlined structure.
- Comprehensiveness and depth of subject knowledge: demonstrated mastery and critical understanding of the topic.
- Appropriateness of methodology: justification and effective application of methods used for analysis.
- Analytical ability: capacity to synthesize information, formulate conclusions, and compare differing viewpoints on the issue.

3. Justification for Source Selection
- Evaluation of the literature base: inclusion of key academic works relevant to the topic, including seminal monographs, dissertations, peer-reviewed journal articles, recent statistical data, and authoritative reference materials.

4. Compliance with Formatting and Presentation Standards
- Correct referencing: accurate and consistent citation of sources and compilation of a complete and properly formatted bibliography.
- Language and academic presentation: adherence to norms of academic literacy, including spelling, punctuation, stylistic clarity, and appropriate use of terminology.
- Project length and formatting: compliance with institutional requirements for volume and formal presentation.

Project work encompasses not only the collection, processing, systematization, and synthesis of information related to the chosen topic, but also constitutes an independent scholarly investigation that reflects the author's perspective, offering an original interpretation or proposed solution to the identified problem.

The effectiveness of the project method in comparison with other pedagogical methods is manifested in a deeper assimilation of educational material, the development of research and critical skills, as well as in the formation of sustainable motivation for learning through practical orientation and personal involvement of postgraduate foreign language students in the educational process.

Project activities provide great opportunities to gain both personal and professional experience. It promotes the formation of postgraduate foreign language students' skills of independent search and application of knowledge, the development of argumentation of their own point of view, as well as communication skills. The key goal of project-based learning is to develop the ability to engage in independent educational and cognitive activity, that is, the ability to learn. This presupposes the active involvement of the postgraduate foreign language student in the educational process, his/her transformation from a passive performer into an active participant in educational activities. The project method makes it possible to effectively implement a personality-oriented approach to learning.

The project method forms the active position of the postgraduate foreign language student as a subject of the educational process: he/she independently puts forward ideas, initiates actions and implements his own creative intentions. In turn, this activity contributes to the development of thinking, skills, abilities, character, personal qualities, the accumulation of knowledge and the formation of interpersonal relationships.

## 4. Results

Postgraduate foreign language students have an understanding of what research is, what its goals and objectives are, however, they do not always have motivation or skills for independent work in the educational process, for searching for and analysing information, which makes it very difficult to develop research competence. But in the process of obtaining a professional foreign language education, this competence must be formed from the first days in postgraduate studies, so that by the graduation stage, students have fully developed the necessary research skills and abilities.

In order to develop master's students' research competence, the educational environment of the university must have several interconnected components. The first component is the disciplines of the research module. Within the framework of the educational programme "Training of Foreign Language Teachers", the following academic disciplines are included in the research module: "Linguistic and Didactic Theories, Research Methods", "Planning and

Organizing Scientific Research", "Research Models in Applied Linguistics", "Professional English for Academic Purposes" and research practice (Table 2).

*Table 2.* The disciplines of the research module

| Research activity | Academic discipline | Learning outcomes |
|---|---|---|
| to distinguish and navigate pedagogical concepts and approaches | "Linguodidactic Theories, Research Methods" | to be able to outline the theoretical basis of the study |
| to formulate ideas and hypotheses, research work plans | "Planning and Organizing Scientific Research" | to be able to determine the object and subject of research |
| to carry out collection of information necessary for analysis | "Planning and Organizing Scientific Research" | to be able to organize information search |
| to distinguish between valid and invalid sources of information | "Planning and Organizing Scientific Research" | to be able to process and analyse information obtained during collection |
| to read posing questions | "Professional English for Academic Purposes" | critical reading skills: note-taking, annotation, structure analysis, generalization |
| to distinguish and apply quantitative and qualitative analysis tools | "Research Models in Applied Linguistics", Research Practice | to be able to analyse the data |
| to process research results | "Professional English for Academic Purposes"; "Research Models in Applied Linguistics", Research Practice | to be able to write analytical reports, papers, reviews, abstracts |

The diagnostics have been performed using the following tools: the questionnaire aimed at identifying the level of research competence of postgraduate foreign language students and pedagogical observation. A questionnaire was designed and applied to a sample of 71 master's degree students in the educational programme "Training of Foreign Language Teachers". The survey was conducted among postgraduate students at the Kazakh Ablai Khan University of

International Relations and World Languages. The questionnaire was administered using Google forms. The postgraduate students were asked to rate their levels of research competence in the certain types of research skills (Table 3).

*Table 3.* Questionnaire on levels of mastery of the research skills

| Research skills | Strongly agree | Somewhat agree | Neither agree nor disagree | Strongly disagree |
|---|---|---|---|---|
| identifying the main parts of research | | | | |
| defining the objectives of research | | | | |
| identifying and applying relevant theories in my study | | | | |
| analysing various publications and evaluating their reliability | | | | |
| independent completion of research | | | | |
| applying scientific research methods | | | | |
| organizing and conducting basic experimental research | | | | |
| processing the obtained data | | | | |
| presenting research results in accordance with the requirements for the content and style of scientific publications | | | | |
| formatting references correctly | | | | |

The key finding from the questionnaire reveals that approximately 62% of respondents reported their ability to present research findings in compliance with the established standards for scientific content and style. Moreover, the majority of postgraduate foreign language students (60.6%) indicated that they are capable of formulating research objectives.

Additionally, nearly half of the respondents (49.3%) asserted their ability to conduct and complete research independently (Figures 2 and 3).

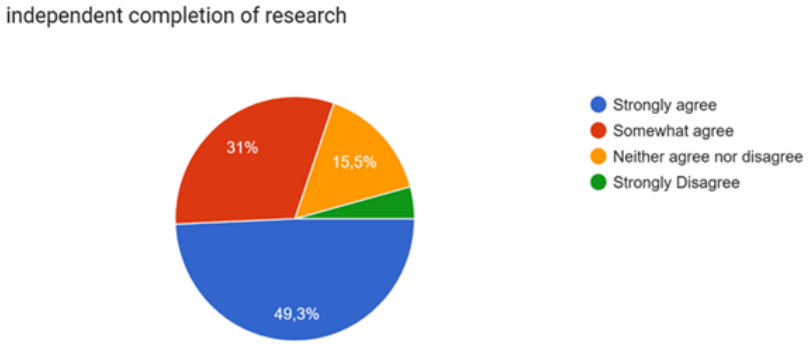


*Figure 2.* Independent completion of research

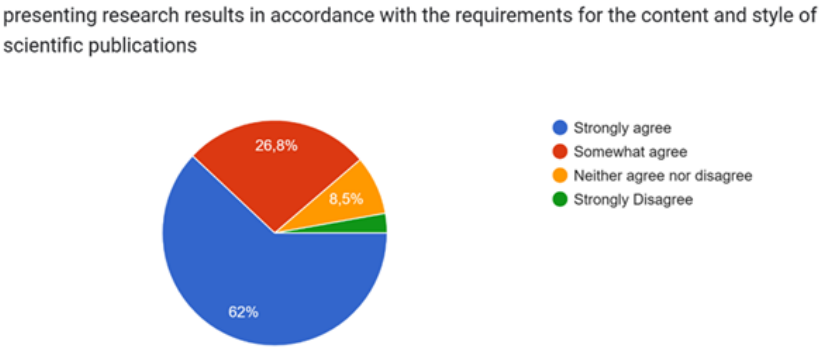


*Figure 3.* Presenting research results

According to the findings, 56% of postgraduate foreign language students are capable of identifying and applying relevant theoretical frameworks in their research. In contrast, 24% experience difficulties in working with theories related to their research problem (Figures 4 and 5).

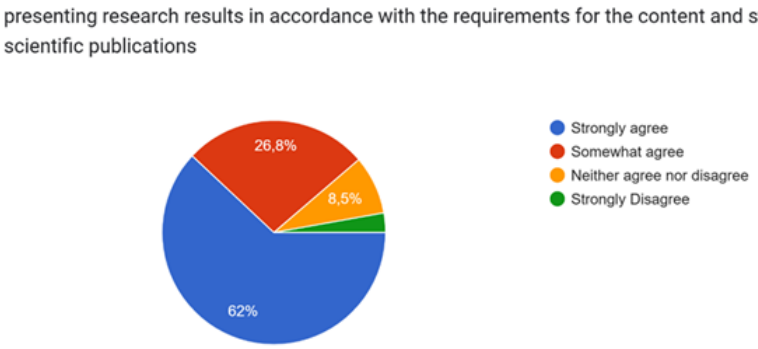


*Figure 4.* Presenting research results for the content and style of scientific publications

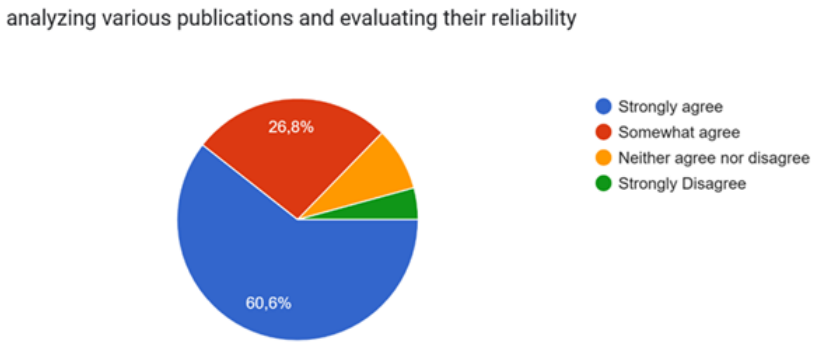


*Figure 5.* Analysing various publications and evaluating their reliability

Since research competence entails engaging postgraduate foreign language students in research activities to facilitate their acquisition of relevant experience, the technologies implemented should be designed to create conditions conducive to this process. Through mastering the research module, postgraduate foreign language students gain knowledge of the theory and methodology of pedagogical research. The primary educational outcome of this module is the development of a research project. Assessment methods include the defence of the research topic and problem, the development of an individual research programme, and the modeling of a research project. Postgraduate foreign language students identify research topics (either individually or in groups), formulate individual research plans, provide supervision and support throughout the research process, and present their findings.

To foster research competence among the postgraduate foreign language students, they were required to explore the potential of their chosen research topic, independently develop a work plan, conduct a class analysis within the framework of a research project, and design a series of exercises tailored to the specific characteristics of the student cohort and their level of foreign language proficiency.

The university fosters a scientific environment through activities such as conference presentations, article publications, and participation in research competitions. The development of research competence among postgraduate foreign language students is facilitated through the structured supervision of their research activities.

A model for the phased implementation of project-based learning technology to enhance postgraduate foreign language students' research competence in postgraduate foreign language education has been proposed. This model is grounded in theoretical concepts related to the nature and content of research competence, as well as the potential of project-based learning. It outlines a sequential process in which postgraduate foreign language students complete projects at three levels throughout their studies. At the first level (Rating Control 1), postgraduate foreign language students submit the theoretical component of their research, such as term papers or theses. At the second level (Rating Control 2), they prepare practice-oriented assignments, including reports and presentations. At the third level, postgraduate

foreign language students present a final project product reflecting creative research activity, which serves as their examination component.

The model also includes the development of scientific and methodological materials aimed at fostering postgraduate foreign language students' research competence. It emphasizes the enhancement of research tasks by incorporating problem-based learning, gradually increasing the complexity and interdisciplinary nature of independent project work, and immersing postgraduate foreign language students in scenarios that closely resemble real professional settings.

An experimental study on the development of research competence among postgraduate foreign language students through academic disciplines demonstrated an increase in student engagement in independent research. This progress was achieved through the effective integration of research projects, the expansion of structured and supervised independent work, and the provision of methodological support. The findings of the experiment indicate that postgraduate foreign language students are more actively engaged in research when participating in structured research projects.

The monitoring and diagnostic system comprised several key components, including the objectives for data collection, methods for gathering, storing, and processing information, channels through which data was collected, as well as the criteria and indicators used to assess the information. Additionally, the system incorporated procedures for processing data to develop theoretical approaches for organizing experimental research. These components facilitated the collection and analysis of information utilized in the experimental study.

The analysis of completed research projects and the presentation of results by postgraduate foreign language students revealed that 35% demonstrated a high level of research competence, 55% exhibited an average level, while 10% were unable to successfully complete the project. The majority of postgraduate foreign language students (60%) encountered challenges in justifying the relevance of their study, defining research objectives and aims, and formulating a hypothesis. However, with guidance from instructors, they were able to independently select appropriate research methods, conduct the study, and present their findings. Notably, 64% of postgraduate foreign language students experienced difficulties in presenting their research findings in the form of scientific theses and articles.

These findings suggest that the development of scientific research skills is a continuous process throughout the duration of the postgraduate programme. All research projects required postgraduate foreign language students to formulate ideas and hypotheses, collect and analyse relevant information, differentiate between reliable and unreliable sources, apply both quantitative and qualitative analytical methods, and interpret research outcomes. Some postgraduate foreign language students reported difficulties in working with specialized literature, defining research objectives, formulating hypotheses, and interpreting results.

Thus, based on the conducted research, the organizational and methodological conditions necessary for the effective development of research competence among postgraduate foreign language students specializing in the "Training of Foreign Language Teachers" educational programme were identified and empirically tested.

## 5. Discussion

In this paper, the authors set out to expand the understanding of the significance and effectiveness of the use of project-based methods in the educational process. The project-based method in this particular case aims at developing research competence in postgraduate foreign language students, improving their research skills necessary for the implementation of research work and undergoing research practice, which is one of the key research activities, thereby increasing the level of academic training of future researchers. Specifically, the authors aimed to identify whether postgraduate foreign language students have research competence in the process of implementing research activities, and what research skills and abilities postgraduate students can develop and improve through the introduction of innovative teaching methods, among which project technology is of the greatest interest.

The findings of this study indicate that the majority of respondents reported their ability to present research findings in accordance with the content and style standards of scientific publications, define research objectives, and apply appropriate theoretical frameworks to their studies. However, only half of the respondents stated that they were capable of independently conducting research. A smaller proportion of postgraduate foreign language students encountered difficulties in working with theories relevant to their research problem.

The results of the study demonstrate the growth of postgraduate foreign language students' activity and readiness in independent research work and the formation of research competence, which was achieved through the introduction of a research project into the educational process, which involves three stages: presentation of the theoretical (conceptual) part, demonstration of the practical (empirical) part, defence of the research product. The implementation of a research project using the three main stages contributes to step-by-step and consistent research competence formation, thereby enabling postgraduate foreign language students to emphasize and take into account recommendations at each stage of the research activity. This will contribute not only to the successful development of research competencies, but also to their improvement and modification, thereby having the opportunity to quickly adapt to new trends emerging in the scientific environment and meet the requirements for writing scientific articles and preparing research projects in the future.

The project-based method is primarily designed to create conditions for engaging postgraduate foreign language students in research activities, fostering research skills, and developing practical research experience. As part of the research module, postgraduate foreign language students initially study the theory and methodology of pedagogical research. They

then progress to developing a research project plan, working on its content, and ultimately producing a research output that can be effectively applied in practice, integrated into pedagogical activities, and serve as a framework for conducting scientific research.

The evaluation of research projects is conducted using the following assessment tools: the defence of the research topic and problem, the validation or refutation of the proposed hypothesis, and the development of a research product.

The findings of this study further demonstrate that project-based learning technologies serve as an effective and powerful tool for enhancing the research competence of postgraduate foreign language students. The effectiveness of these methods lies in immersing postgraduate foreign language students in authentic research tasks, fostering a deeper understanding of research processes, developing critical thinking skills, and equipping postgraduate foreign language students with practical research competencies.

Despite the benefits of project-based methods in developing essential research skills, postgraduate foreign language students continue to face certain challenges. These include difficulties in justifying the relevance of their research, working with specialized literature to define research objectives, formulating a hypothesis, and presenting their findings in the form of scientific theses and research papers. Therefore, to fully develop research competence, it is essential to cultivate a comprehensive scientific environment that includes:

- The integration of specialized modules and courses covering various aspects of scientific research, such as research methodology, statistics, data analysis, academic writing, and research ethics.
- The organization of scientific and practical seminars, workshops, and colloquiums that allow postgraduate foreign language students to apply their knowledge in practice, participate in research activities, and engage in discussions on research findings.
- The involvement of experienced researchers and faculty members as supervisors who provide guidance and support to postgraduate students throughout the research process.
- Encouraging participation in interdisciplinary research projects that integrate different fields of knowledge, enabling students to address complex research problems using diverse methodologies.
- Ensuring access to laboratories, research equipment, and other essential resources required for conducting experiments and empirical studies.
- The organization of scientific conferences and symposia where postgraduate students can present their research, exchange ideas, and receive constructive feedback from faculty and peers.

– The establishment of information networks connecting postgraduate students, researchers, and scientific organizations to facilitate collaboration and the exchange of research ideas.

The integration of these components will contribute to the establishment of a dynamic and productive scientific environment that fosters the development of research competencies among postgraduate foreign language students. The findings of this study align with the research conducted by Dominguez and Judikis (2016), which emphasizes the necessity of blended learning for the effective development and enhancement of research competencies. This approach facilitates the comprehensive acquisition of knowledge, the development of self-organization skills, critical thinking, and digital literacy, as well as effective time management for research planning, hypothesis formulation, and the advancement of communication and academic skills.

Furthermore, in agreement with Munthe and Rogne (2015), postgraduate foreign language students entering postgraduate programs should already possess a foundational level of research competence in pedagogical sciences, acquired during their undergraduate studies. The postgraduate level requires more advanced scientific inquiry and analysis, necessitating that students not only gain theoretical knowledge but also cultivate critical thinking, research skills, and the ability to apply knowledge in practice. This process involves engaging in research paper writing, participating in academic projects, and successfully defending scientific theses.

However, it is important to acknowledge that undergraduate students develop research skills primarily through the preparation and writing of a professional-applied project. However, this experience is not universal, as it is mostly acquired by students with high academic performance during the final three years of study. In this context, and in line with the perspective of Abdulai and Owusu-Ansah (2014), students at both undergraduate and postgraduate levels are required to engage in research and submit a dissertation as part of the academic requirements for obtaining a degree.

Therefore, active participation in a research-oriented academic environment, direct involvement in research activities, and the successful implementation of research projects are essential for fostering research competence among postgraduate foreign language students. Furthermore, cultivating a positive attitude toward research, particularly among those training to become language teachers through project-based learning is crucial for enhancing their overall research proficiency.

It is important to note that this study was conducted with a sample of only 71 postgraduate foreign language students enrolled in the “Training of Foreign Language Teachers” programme at the Kazakh Ablai Khan University of International Relations and World Languages. Expanding the sample size to include a larger number of postgraduate foreign language students could significantly enhance the reliability and validity of the findings,

allowing for the identification of more precise trends and patterns. Additionally, incorporating a greater diversity of opinions and experiences would enrich the analysis and lead to more well-founded conclusions.

Furthermore, involving postgraduate foreign language students from other universities as respondents would provide a broader perspective, enabling a comparative analysis of different educational contexts. Such an approach would facilitate the identification of similarities and differences in educational strategies, teaching methodologies, and students' perceptions of the learning process. As a result, it would help determine the most effective methodological approaches for developing research competence.

Future research in this area could yield more valuable insights for scholars and educators, particularly through comparative studies on the effectiveness of project-based learning methods in fostering research competence.

## 6. Conclusion

This article highlights the necessity and effectiveness of employing project-based methods to develop research competence among postgraduate foreign language students. The findings of this study indicate that integrating postgraduate students into research activities is effectively facilitated through project-based learning. Research competence acquired through project-based methods enables students to formulate research findings in accordance with the content and style requirements of scientific publications, define research objectives and tasks, and apply appropriate theoretical frameworks in their studies. However, for the comprehensive development of research competence, it is essential to establish a specialized scientific environment that extends beyond theoretical knowledge acquisition to include the development of practical skills. This involves active engagement in research projects, collaboration with experienced researchers, and access to modern scientific tools and resources. Furthermore, this study contributes previously unpublished data on the effectiveness of project-based methods in fostering research competence among postgraduate foreign language students, based on survey results. These findings serve as a valuable foundation for further research and exploration in this field. Future studies should benefit from incorporating data on additional methodologies and technologies aimed at enhancing research competence. The results obtained can be applied to the design of courses and modules focused on developing research skills and can serve as a basis for methodological recommendations in the implementation of research projects.

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