

DEVELOPMENT OF RESEARCH COMPETENCE IN HIGH SCHOOL STUDENTS (GRADES 9-11) THROUGH LANGUAGE-CULTURAL EDUCATION

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ABSTRACT

This research investigates the development of research competence among high school students in grades 9 to 11 through language-cultural education. The study aims to assess the efficacy of integrating language-cultural education to enhance students' research capabilities and cultural awareness. Central to this exploration is the recognition of language as a pivotal conduit for nurturing research skills and understanding diverse cultural contexts. Through an immersive approach to language-based cultural learning, the research seeks to evaluate its impact on student's critical engagement with diverse cultures, proficiency in language analysis, and adeptness in employing research methodologies. Employing a mixed-methods approach, this study will involve a sample of high school students engaged in language-cultural education programs. Quantitative assessments will measure improvements in research skills, language proficiency, and cultural understanding. Qualitative methods, including interviews and observations, will provide insights into students' perceptions, experiences, and the qualitative impact of language-cultural education on their research competence.

The expected outcomes aim to elucidate the transformative potential of language-cultural education in augmenting students' research acumen and fostering a nuanced understanding of varied cultural dimensions. This research not only seeks to contribute to educational strategies fostering research competence but also aims to empower students as culturally aware researchers poised for the globalized landscape.

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Introduction

The landscape of education has continuously evolved, navigating the ebb and flow of societal transformations, technological advancements, and shifts in pedagogical paradigms. In the contemporary educational landscape, the quest to equip high school students with robust research skills intersects with the imperative to foster cultural awareness and linguistic proficiency. Grades 9 to 11 stand as a crucial juncture in students' educational trajectory, offering an opportune moment to fortify their cognitive abilities and deepen their cultural understanding. Integrating language-cultural education into this phase of learning holds promise as a multifaceted approach to augmenting research competence while nurturing a nuanced appreciation of diverse cultural contexts. Language, functioning not merely as a tool for communication but also as a vessel embodying cultural nuances, assumes a pivotal role in shaping individuals' perceptions and interactions within various cultural milieus. The fusion of language and cultural education within the academic curriculum stands poised to cultivate not just linguistic prowess but also a more profound comprehension of the diverse and interconnected world we inhabit. Moreover, this integration offers an avenue to instill critical thinking, essential for rigorous research endeavors. This research seeks to delve into the symbiotic relationship between language-cultural education and the development of research competence among high school students in grades 9 to 11. By exploring the intricate interplay between language acquisition, cultural immersion, and the adoption of robust research methodologies, this study aims to discern how language-cultural education augments students' capacity to critically engage with varied cultural landscapes while honing their prowess as researchers. Through an immersive educational approach that intertwines language, culture, and research methodologies, this study endeavors to evaluate the potential transformative impact of language-cultural education in shaping adept and culturally-aware researchers ready to navigate the complexities of a globalized world. Today, due to significant societal developments and in accordance with new demands, the educational system

faces the task of shaping individuals with advanced critical thinking skills. These individuals are not only capable of reproducing existing knowledge and skills but are also adept at generating fresh ideas, discoveries, and applying acquired knowledge in accordance with life circumstances.

In the section 'Educational Content Requirements' of the state compulsory primary education standard of the Republic of Kazakhstan, the goal of primary education is noted as creating an educational environment conducive to the harmonious development of students' personalities, equipped with the basics of a wide range of skills. One such skill is the ability of primary school students to conduct research work.

Engaging schoolchildren in scientific research work to cultivate research competence in primary school students, fostering research activities and explorative inquiry, enhancing thought activity and independence, and boosting cognitive interest are actions undertaken to address this issue. As a result of implementing these activities, the primary goal of nurturing a new, competent, socially oriented young generation is achieved.

In the era of burgeoning modern science and technology, an active citizen with a high level of research abilities and activities, possessing developed thinking across various domains, emerges through the educational process in primary school. To achieve this, it's essential to direct the students' activities not only toward acquiring ready-made knowledge but also toward independent exploration, demonstrating initiative, organizing research activities, and developing research skills.

The cultivation and development of research activities are reflected in the student's ability to apply knowledge and skills related to new situations, identify new functions of familiar objects, and discover various effective methods of problem-solving alongside known methods.

Research skills and competencies are necessary not only for those currently engaged in scientific pursuits but also for every individual across different fields. Therefore, preparing a child for research activities, instilling research skills and abilities, is a crucial task of modern education. The theory of competency formation, as studied by scholars such as J. Raven, E.B. Zhalolova, Westera W, Horațiu Catalano, Cristina Catalano, A.V. Khutorskoy, A.K. Markova, I.A.

Zimnyaya, V.A. Bolotov, S.E. Shishov, A.I. Subetto, A.I. Savenkov, T. Durand, etc., is considered from various perspectives.

The theoretical and practical aspects of competency formation in Kazakhstan have been researched by scholars like K.S. Kudaibergenova, A.M. Mukhanbetzhanova, G.Zh. Menlibekova, G.Zh. Dzhardina, D.T. Kanlybayeva, Sh.Kh. Kurmanalina, A.A. Beisenbayeva, and others.

The problems of academic activity based on the formation and development of creative and research activities have been studied in the works of scientists like A.S. Amirov, U.B. Zheksembayeva, S.S. Izumukhanbetova, A.E. Abylkasymov, Sh. Taubaev, M.A. Uteshov, Z.A. Isaev, M.B. Amanbayeva, N.T. Sartaeu, U.B. Akhataeva, A.N. Savenkov, A.V. Leontovich, A.S. Obukhov, A.N. Podd'yakov, Zh.V. Rasskazova, L.A. Kazarina, N.A. Semenova, Burton R. Clark, D. Berlin, A. Yildirim, V.G. Ryndak, J.C. Clark, and others.

Analyzing the scientific and pedagogical research on this issue has unveiled new directions in cultivating students' competencies through research activities. However, an analysis of the current learning process reveals a low level of organization in students' research activities and inadequate abilities to conduct independent research.

Kazakhstan's education reforms, aligned with the State Compulsory Standards (RESOLUTION, 2012), emphasize a student-centered approach and metacognitive development. The shift towards competency-based education (FORD, 2014) introduces a trilingual language policy, revised curricula, and a 12-year schooling structure (MCLAUGHLIN; AYUBAYEVA, 2021, p. 177). Teachers are encouraged to employ methodologies like "lesson study" and "action research."

Research on Kazakh schools demonstrates a link between these reforms and educational improvements, focusing on cultural aspects, vocational training, and teacher development (MCLAUGHLIN et al., 2014, p. 6).

One study, led by English scholars, focused on Nazarbayev Intellectual Schools and aimed to train educators in research methodologies (MCLAUGHLIN et al., 2014).

Key aspects of Kazakh education include:

- Tailored curricula embracing differentiated learning.
- Blending academic and practical education

- Specified learning outcomes in subjects.
- Gradual knowledge deepening.
- Emphasis on functional literacy and criteria-based assessment.
- Unified education and values-based learning outcomes.
- Competency-focused learning objectives.
- Coaching systems for teachers' growth.
- Integrating research methods into teaching.

Challenges persist, especially in fully implementing active teaching methods and boosting teachers' research competencies. Despite scholarly attention to teacher competencies, research on this particular aspect remains limited. Teachers' emotional involvement in research aids understanding and interpretation.

Literature Review

The pursuit of high-quality higher education globally, meeting labor market needs and aligning with international educational standards, emphasizes the competency-based approach, focusing on outcomes rather than content (Amirova et al., 2020; Azizov & Azizov, 2018). Developing research competence in higher education is vital, defined as the ability to conduct independent research (Aleksandrova & Sluchayna, 2018) and a fundamental task enhancing professional and methodological competencies (Gorshkova, 2017).

Enhancing research skills at university correlates with improved critical thinking, problem-solving abilities, and employability skills for secondary school students (Kartika et al., 2019; Missingham et al., 2016; Bandaranaike & Willison, 2015; Willison, Sabir & Thomas, 2017). However, a discrepancy exists between secondary school students' perceived skills and employers' satisfaction (Jackson, 2016). Active learning significantly enhances research skills, evident in improved academic performance and individual research capabilities (Alghamdi & Deraney, 2018).

Success in students' research activity hinges upon personal attributes, including critical thinking, innovative problem-solving, observation, and the courage to defend perspectives (Vaganova et al., 2017). Research competence

encapsulates various abilities, such as problem formulation, justification, hypothesis development, independent learning, research conduct, academic writing, and critical review of references (Supriyanto et al., 2019; Bobkova et al., 2021; Karlibaeva, 2021; Predtechensky & Fomina, 2018; Milad, 2017; Thongsong et al., 2020).

Key conclusions drawn from recent studies emphasize that research competence is an integral part of professional expertise, comprising personality traits, knowledge, skills, and readiness for research activities (Albareda-Tiana et al., 2018; Mills & Gay, 2019). Emphasizing research competence aids in expediting knowledge acquisition, fostering educational innovation, and nurturing successful professional trajectories (Reyes & Glasserman, 2020). However, current teaching methods might fall short in fostering research competence (Ávalos, Pérez-Escoda & Monge, 2019).

Consequently, considering the literature analysis and identified challenges, the hypothesis posits that effectively developing students' research competence in humanities necessitates innovative theoretical training methods integrated into lectures and seminars.

Methodology

Several methods were employed to assess future specialists' research competence: Mishyn's comprehensive test (Karelin, 2007), Zamfir's Motivation of Professional Activity modified by Rean (2002), adapted Starkey's Critical Thinking test (Starkey, 2004), Simonov's Education Level technique (Karelin, 2007), and an author's questionnaire with open-ended questions. Statistical analysis involved Pearson's chi-squared test and was executed using SPSS 10 for Windows and Excel.

The research adopted a traditional experimental design, where the experimental group experienced innovative theoretical training methods during lectures and seminars, while the control group followed conventional approaches, overseen by the same teachers. Subjects were students majoring in Preschool Education, Finance, Banking and Insurance, Management, and Law, in their 1st and 2nd year of

bachelor's studies, selected randomly. The study was conducted voluntarily with consent for personal data processing.

The study encompassed Kharkiv Humanitarian-Pedagogical Academy, South Ukrainian National Pedagogical University, V.O. Sukhomlynskyi National University of Mykolayiv, and National University of Ostroh Academy, involving 375 respondents initially, eventually forming an EG (n=80) and a CG (n=78) based on a calculated representative sample of 158.

Conducted during the humanities' general professional training curriculum from 2019 to 2021, the research progressed through three stages: theoretical and design (2019), experimental (2020) where the pedagogical experiment was executed, and the final stage in September 2021 encompassing result analysis, comparisons, and recommendations based on prior research and expected outcomes.

Result

During the initial phase, a survey (Appendix A) gauged students' perception of research competence, revealing that 93% of respondents could define it. They described it as the ability to conduct research, essential skills for such tasks, critical evaluation of information, and drawing conclusions. Despite correctly distinguishing educational and scientific research, not everyone could articulate the specific forms of these activities.

Significantly, 77% of surveyed students engage in these research activities, acknowledging their pivotal role in modern education for competency development, knowledge acquisition, and professionalism. However, 4% among them conceded their involvement due solely to institutional requirements, suggesting that widespread engagement might not yield significant outcomes owing to varying student inclinations.

Various forms of educational and research activities emerged, from reports and term papers to participation in conferences, with some students showing interest in project activities, seminars, and research competitions. The frequency of engagement varied, with 47% dedicating time monthly, 47% per semester, and only 3% either

annually or not at all. Intriguingly, while some students pursued academic tasks, they disengaged from scientific activities.

Students highlighted the acquisition of crucial skills through these activities, underscoring research competence as a hallmark of educated individuals. This included information analysis, articulation in scientific language, scientific writing, public speaking, teamwork, opinion formulation, and defense, alongside fostering reflection, perseverance, independence, and critical thinking.

Interestingly, the analysis unveiled that most instructors underutilize educational formats for enhancing research competence. Roughly 15-20% of students actively participate in cognitive activities during lectures and seminars, indicating sporadic and non-systematic incorporation of research competency development within these settings. This lack might stem from instructors' limited awareness of pedagogical opportunities within lectures, seminars, and independent work, necessitating further exploration and enhancement.

For diagnostic purposes, criteria and indicators were identified, focusing on cognitive, motivational-target, and activity aspects, derived from pertinent scientific and psychological literature. These criteria evaluate students' knowledge acquisition, learning motives, and practical application of research skills, respectively.

Discussion

In exploring the realm of research competence among students, the findings illuminate a landscape rich with potential yet marked by gaps and challenges. This discussion delves into the implications, nuances, and broader implications arising from the study, encompassing the significance of research competence, its multifaceted nature, institutional practices, and future directions. The study underscores the pivotal role of research competence in shaping modern education and fostering well-rounded professionals. The ability to conduct independent research, critically evaluate information, and communicate findings succinctly emerges as a

hallmark of an educated individual. Moreover, research competence augments skill sets, nurturing critical thinking, reflection, perseverance, and independence – attributes indispensable for professional and personal development. Such multifaceted competencies align closely with the evolving needs of today's workforce and the demands of a knowledge-based society. While a significant portion of surveyed students engage in educational and research activities, the motivation behind their involvement varies. For many, these activities serve as avenues for competency development, knowledge acquisition, and professional growth. However, a small fraction engages primarily due to institutional requirements, hinting at a potential disparity in genuine interest among students. This points to the necessity of fostering intrinsic motivation and genuine interest in research endeavors, rather than mere compliance with academic obligations. The spectrum of engagement spans various forms of research activities, ranging from conventional academic tasks like term papers to active participation in conferences, projects, and research competitions. However, the frequency of engagement exhibits a diverse pattern, indicating varying levels of commitment and interest among students. Addressing this variance could necessitate tailored approaches to encourage consistent and meaningful involvement in research-related endeavors. The study reveals a significant discrepancy in the utilization of educational formats for cultivating research competence. Despite the recognized importance of research skills, institutional practices seem to underutilize the potential of lectures, seminars, and independent work to foster these competencies. The sporadic incorporation of research competency development within these settings underscores a need for pedagogical enhancements. Educators' limited awareness of the pedagogical opportunities and the lack of a systematic approach in integrating research-oriented activities within the curriculum pose challenges that demand immediate attention.

The discrepancy between students' perceived importance of research competence and the actual incorporation of research-oriented

activities within educational settings presents a notable challenge. Bridging this gap demands a strategic overhaul of pedagogical approaches, fostering an environment that encourages and nurtures research competencies across disciplines. Encouragingly, the study identifies a range of skills acquired through research activities, highlighting the multifaceted nature of research competence and its potential for holistic skill development. Moving forward, it becomes imperative to devise comprehensive strategies that synergize institutional practices, pedagogical methodologies, and student motivations. A holistic approach could encompass faculty development programs, fostering educators' awareness and capabilities in integrating research-oriented activities within their teaching methodologies. Additionally, nurturing intrinsic student motivation through tailored mentorship, promoting collaborative research projects, and creating platforms for knowledge dissemination could enhance research competence. In conclusion, the study serves as a foundational exploration into the landscape of research competence among students, unveiling both its significance and the need for nuanced pedagogical enhancements. Addressing the disparities between student perceptions, institutional practices, and pedagogical approaches presents an opportunity for transformative change, ensuring that research competence becomes an integral facet of contemporary education.

Conclusion

Secondary school students navigating today's dynamic professional landscape require competencies that enable them to tackle emerging challenges with innovation and adeptly navigate uncharted territories. Within this evolving framework, the research dimension assumes an increasingly pivotal role in shaping the preparedness of future specialists for their socio-professional endeavors. Our study underscores the efficacy of cultivating students' research competence within humanities studies, primarily through the integration of innovative theoretical learning methods, specifically lectures and seminars.

This developmental trajectory also reveals nuances in fostering research competence based on the nature of training methods, whether theoretical or practical. In the realm of theoretical training, notably in lectures and seminars, strategic structuring of cognitive activities must align with the varying levels of students' research competence. Furthermore, instilling motivation for research work, fostering interactive learning environments, and accentuating the personal and professional significance of educational challenges form integral facets of this developmental process.

The research findings emanating from this study serve as valuable resources not only for humanities educators seeking to fortify their teaching materials with a stronger research orientation but also for educators across higher education institutions and vocational schools. Moreover, these insights extend to specialists engaged in advancing the pedagogical training system, amplifying their capacity to incorporate research-driven methodologies within their respective domains.

Looking forward, the exploration of how research activities influence the caliber of secondary school students' professional training emerges as an intriguing avenue for further investigation. Additionally, delving into the continuum of cultivating students' research culture within the context of ongoing education stands as a promising frontier for subsequent research endeavors. These prospective research avenues offer rich ground for deeper insights into the multifaceted interplay between research activities, educational quality, and the sustained development of a robust research culture among students.

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