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METHODOLOGY FOR TEACHING STUDENTS TO ANALYZE SCIENTIFIC INFORMATION AND DRAW INTEGRATIVE CONCLUSIONS IN CREATIVE PEDAGOGY EDUCATION

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Abstract. This article examines the methodological foundations of teaching students to analyze scientific information and formulate integrative conclusions in creative pedagogy education. Particular attention is paid to the integration of knowledge from pedagogy, psychology, sociology, and other related disciplines. The study proposes a methodological sequence encompassing scientific information retrieval, critical analysis, interdisciplinary comparison, synthesis, and the presentation of research findings. The proposed approach aims to develop students' analytical thinking, information evaluation, independent reasoning, and ability to formulate scientifically grounded conclusions. The article also identifies the pedagogical potential of interdisciplinary learning activities in organizing research-oriented education in higher education institutions.

KEYWORDS. Creative pedagogy, scientific information, critical analysis, interdisciplinary approach, integrative conclusions, research activity, analytical thinking, higher education.

INTRODUCTION.

The development of students' research abilities is an important priority in higher education. In the context of increasing scientific information and interdisciplinary knowledge, students need not only to acquire theoretical knowledge but also to critically analyze scientific sources, compare different perspectives, and formulate independent conclusions.

Creative pedagogy provides opportunities to develop these abilities through problem-based learning, creative assignments, and interdisciplinary educational activities. In particular, integrating knowledge from pedagogy, psychology, sociology, and related disciplines enables students to examine educational phenomena from different perspectives and develop a comprehensive understanding of research problems.

However, the effective use of scientific information requires purposeful methodological guidance. Students should be able to identify relevant sources, evaluate scientific arguments, establish connections between different disciplinary perspectives, and synthesize the findings into logically grounded conclusions. Therefore, developing an effective methodology for organizing these activities within creative pedagogy education represents an important pedagogical challenge.

The purpose of this study is to develop a methodology for teaching students to analyze scientific information and formulate integrative conclusions in creative pedagogy education.

To achieve this purpose, the study focuses on identifying the pedagogical foundations of scientific information analysis, determining the role of interdisciplinary integration in research-

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oriented learning, and developing methodological procedures that support students' analytical, synthetic, and independent research abilities.

LITERATURE REVIEW

The problem of analyzing scientific information and developing students' research abilities has been examined by various international scholars. The Association of College and Research Libraries (ACRL, 2016) emphasizes that information literacy involves not only searching for and accessing information but also critically evaluating sources, synthesizing ideas, and creating new knowledge. This framework provides an important theoretical foundation for developing students' analytical and research skills in higher education.

Taylor and DiGiacomo (2023), in their systematic review of information literacy in educational contexts, highlight the importance of adapting information literacy approaches to different academic disciplines and learning environments. Their findings demonstrate the need to consider disciplinary characteristics when developing students' information-related competencies.

The significance of interdisciplinary learning is also reflected in contemporary educational research. Oudenampsen et al. (2024) emphasize that interdisciplinary learning contributes to academic engagement, metacognitive development, and the ability to consider different perspectives. These findings are particularly relevant to creative pedagogy, where the integration of pedagogical, psychological, and sociocultural knowledge can facilitate a comprehensive analysis of educational problems.

The reviewed studies establish the theoretical importance of critical information analysis and interdisciplinary learning. However, the methodological organization of these processes as a connected system for developing students' ability to formulate integrative conclusions within creative pedagogy education requires further attention. This study addresses this issue by proposing a structured methodology that combines information analysis, interdisciplinary comparison, synthesis, and evidence-based conclusion-making.

RESEARCH METHODOLOGY

The study is based on interdisciplinary, competency-based, and activity-oriented approaches. These approaches provide a methodological foundation for developing students' abilities to search for, critically analyze, compare, and synthesize scientific information in creative pedagogy education.

The research employs the following theoretical methods: analysis of scientific and methodological literature, comparative analysis, synthesis, generalization, and pedagogical modeling. These methods are used to identify the educational potential of interdisciplinary integration and develop a structured methodology for teaching students to formulate integrative conclusions.

The proposed methodology consists of five interconnected stages: scientific information retrieval and selection, critical analysis of scientific sources, interdisciplinary comparison, formulation of integrative conclusions, and presentation of research findings.

At each stage, students perform specific analytical and research tasks aimed at developing independent thinking, evaluating scientific evidence, establishing interdisciplinary relationships, and constructing scientifically grounded conclusions.

ANALYSES AND RESULTS

In creative pedagogy education, teaching students to analyze scientific information requires a systematic combination of analytical, comparative, and synthetic activities. Based on the theoretical

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analysis, a five-stage methodology has been developed to support students' ability to work with interdisciplinary scientific sources and formulate independent conclusions.

Table 1. Stages of Teaching Students to Analyze Scientific Information and Formulate Integrative Conclusions

Stages	Content of activities	Expected outcomes
1. Information retrieval	Searching for and selecting scientific sources	Information literacy
2. Critical analysis	Examining arguments, evidence, and research findings	Critical thinking
3. Interdisciplinary comparison	Comparing information from pedagogy, psychology, and related disciplines	Integrative thinking
4. Conclusion formulation	Synthesizing scientific findings and developing independent interpretations	Analytical and synthetic skills
5. Research presentation	Presenting and scientifically justifying conclusions	Academic communication

The first stage focuses on developing students' ability to identify reliable scientific sources relevant to a particular research problem. At this stage, students work with academic publications and electronic databases, selecting information according to its relevance and scientific value.

The second stage involves critical examination of the selected sources. Students identify the main arguments, compare authors' perspectives, evaluate research evidence, and determine the strengths and limitations of scientific interpretations.

At the third stage, students establish relationships between knowledge from different disciplines. For example, the analysis of creative thinking may involve pedagogical approaches to learning, psychological mechanisms of creativity, and sociocultural factors influencing individual development.

The fourth stage is directed towards synthesizing the analyzed information and formulating integrative conclusions. Students identify common and contrasting scientific positions, establish conceptual relationships, and develop independent conclusions supported by relevant evidence.

The final stage involves presenting research findings through analytical reports, academic discussions, and scientific presentations. Students justify their conclusions and demonstrate their ability to communicate research results coherently.

The proposed methodology establishes a logical relationship between scientific information retrieval, critical analysis, interdisciplinary integration, and conclusion formulation. Its pedagogical value lies in transforming students from passive recipients of scientific information into active participants in analytical and research-oriented learning.

Thus, the integration of these five stages creates methodological opportunities for developing students' independent reasoning, interdisciplinary thinking, and ability to formulate scientifically grounded conclusions in creative pedagogy education.

CONCLUSION

The study highlights the importance of developing students' ability to analyze scientific information and formulate integrative conclusions in creative pedagogy education. The proposed methodology combines five interconnected stages: information retrieval, critical analysis, interdisciplinary comparison, conclusion formulation, and research presentation.

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The methodological approach creates opportunities to integrate knowledge from different academic disciplines, strengthen students' analytical and synthetic thinking, and encourage independent research activities.

It is recommended that higher education institutions incorporate interdisciplinary analytical assignments, comparative source analysis, and evidence-based conclusion-formulation activities into creative pedagogy courses. These activities can contribute to improving the quality of research-oriented learning and preparing students for independent academic work.

REFERENCES

1. Association of College and Research Libraries. (2016). Framework for Information Literacy for Higher Education. Chicago: American Library Association.
2. Biggs, J., & Tang, C. (2011). Teaching for Quality Learning at University: What the Student Does (4th ed.). Maidenhead: Open University Press. books.google.co.uk+1
3. Mackey, T. P., & Jacobson, T. E. (2011). Reframing Information Literacy as a Metaliteracy. College & Research Libraries, 72(1), 62–78.
4. Repko, A. F., & Szostak, R. (2021). Interdisciplinary Research: Process and Theory (4th ed.). Thousand Oaks, CA: SAGE Publications.
5. Repko, A. F., Szostak, R., & Buchberger, M. P. (2025). Introduction to Interdisciplinary Studies (4th ed.). Thousand Oaks, CA: SAGE Publications.
6. Association for Interdisciplinary Studies
7. Townsend, L., Brunetti, K., & Hofer, A. R. (2011). Threshold Concepts and Information Literacy. portal: Libraries and the Academy, 11(3), 853–869.
8. Spelt, E. J. H., Biemans, H. J. A., Tobi, H., Luning, P. A., & Mulder, M. (2009). Teaching and Learning in Interdisciplinary Higher Education: A Systematic Review. Educational Psychology Review, 21, 365–378. https://doi.org/10.1007/s10648-009-9113-z.