

Exploring the Reform and Practice of the Educational Psychology Course for Primary Education Majors Based on the 5E Instructional Model

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Abstract:

Educational Psychology is one of the core courses in the primary education major, characterized by both theoretical depth and practical relevance. However, current teaching practices face several challenges, including a disconnection between theory and practice and low levels of student engagement, which significantly hinder instructional quality. In response to these issues, this paper begins with an overview of the 5E instructional model, analyzes the existing problems in the teaching of Educational Psychology within the primary education curriculum, and explores the practical application of the 5E model in this context. The goal is to enhance teaching effectiveness and improve students' ability to apply psychological knowledge in real educational settings.

Keywords:

5E Instructional Model, Educational Psychology, Teaching Reform, Primary Education Majors

1. Introduction

With the continuous advancement of basic education reform in the new era, higher standards have been set for the professional competence and instructional ability of pre-service teachers. As a key program for preparing qualified educators for primary schools, the primary education major must focus not only on the systematic teaching of theoretical knowledge, but also on cultivating students' ability to apply theory to real-world teaching practice. Educational Psychology, as one of the core courses in this major, plays a vital role in guiding students to understand learners' psychological development and the underlying mechanisms of teaching and learning [1]. However, in actual classroom practice, the course is often criticized for being overly theoretical, lacking practical orientation, and relying on outdated instructional methods. These issues result in low student engagement and limited capacity to transfer knowledge to

authentic teaching contexts, thus weakening the course's intended educational value [2].

As an interdisciplinary field that integrates psychological theory with educational practice, Educational Psychology covers a broad range of topics, including learning motivation, cognitive and behavioral learning theories, child development, teacher psychology, instructional design, and classroom management. It is highly systematic and conceptually abstract. For primary education majors—many of whom have limited exposure to psychology—these abstract concepts may be difficult to digest. Without appropriate learning scenarios or experiential activities, deep comprehension and knowledge transfer become difficult to achieve. Moreover, students in this major are generally practice-oriented and tend to favor participatory, situational, and collaborative learning environments. They are more likely to develop positive cognition and instructional awareness through task-driven and problem-based learning [3]. Thus, exploring a teaching model that balances theoretical construction with practical application and fosters active student participation has become a critical imperative in reforming the Educational Psychology course.

The 5E instructional model, proposed by the Biological Sciences Curriculum Study (BSCS), is a student-centered and inquiry-based teaching approach that emphasizes problem-solving as the driving force of learning. It consists of five interrelated phases—Engage, Explore, Explain, Elaborate, and Evaluate—that guide students through a coherent learning cycle from experience to understanding and application [4]. Compared with traditional lecture-based instruction, the 5E model places greater emphasis on the generative and open-ended nature of learning processes. It aligns well with the developmental needs of primary education majors by supporting the learning chain of understanding, experiencing, internalizing, applying.

Based on this rationale, this paper adopts the 5E instructional model as a framework to examine the current issues in the teaching of Educational Psychology to primary education majors, and proposes a reform strategy focusing on instructional design, classroom activities, and evaluation systems. The aim is to provide both theoretical support and practical pathways for the systematic improvement of this course.

2. Problems in the Current Teaching of Educational Psychology in Primary Education Programs

2.1. Disconnection Between Theory and Practice: Lack of Application-Oriented Content

At present, the teaching of Educational Psychology in many universities still relies heavily on chapter-based theoretical instruction, with an overemphasis on systematic knowledge delivery and insufficient attention to the integration of theory and educational practice [5]. Although students are often able to recite key concepts such as Piaget's stages of cognitive development or Vygotsky's zone of proximal development, they struggle to apply these theories in real classroom scenarios. For example, when learning about motivation theories, instruction often stops at defining and categorizing theoretical models, without guiding students to apply these concepts in designing classroom motivational strategies. This abstract, decontextualized approach to teaching weakens student engagement and undermines the developmental value of the course [6].

2.2. Monotonous Teaching Methods and Low Student Engagement

Traditional instruction in this course typically follows a lecture-based format, where the teacher speaks and students listen, offering little space for active student participation or critical thinking. Yet Educational Psychology—a subject that requires deep understanding of learners' behavior and development—naturally aligns with the cognitive interests of primary education majors, who are often eager to interact with teachers and engage in discussions about the psychological phenomena observed in children [7]. However, due to the lack of inquiry-based tasks and experiential learning opportunities in current curricula, students tend to passively receive theoretical information rather than constructing meaningful cognitive frameworks. Such a lack of interaction and hands-on engagement not only dampens their curiosity and motivation but also hinders the development of practical teaching skills [8].

2.3. Overreliance on Summative Assessment and Neglect of Competency Development

In most cases, the assessment of Educational Psychology courses in primary education programs still relies predominantly on closed-book final exams, emphasizing the memorization and recall of theoretical knowledge. However, exam scores alone do not provide a comprehensive picture of students' understanding of the subject. By focusing solely on final outcomes, this approach overlooks students' cognitive development, practical abilities, and reflective thinking throughout the learning process [9]. While formative assessment may nominally be included—through attendance records or written reports—it often lacks depth and fails to capture the full trajectory of student growth. For instance, important classroom activities such as case analyses, collaborative lesson planning, and group presentations are typically excluded from formal evaluation systems. This leads students to prioritize grades over learning processes, ultimately diminishing the generative value of the course [10]. For a course that aims to bridge theory and practice, such a one-dimensional evaluation approach is clearly insufficient to achieve its educational objectives.

3. Core Principles of the 5E Instructional Model

3.1. Emphasis on Deep Learning Based on Constructivism

The 5E instructional model is based on constructivist theory and focuses on inquiry-based learning. It sees learning as a process in which students build new knowledge by reorganizing existing experiences. Students start from real problems or situations, use prior knowledge, search for information, and work in groups to explore concepts. With teacher guidance, they deepen their understanding and gradually integrate new knowledge into their thinking.

As Bruner (1961) [11] emphasized, students do not enter the classroom with empty minds. They bring prior experiences and knowledge structures, which shape their understanding. The 5E model offers structured learning stages that guide students to explore meaningfully, helping them not only know facts but also understand underlying principles. This supports the development of higher-order thinking and knowledge transfer.

3.2. Integration of Knowledge Construction and Instructional Structure

The 5E model divides teaching into five stages: Engage, Explore, Explain, Elaborate, and Evaluate. Each stage builds on the previous one. Explore allows students to try and build ideas; Explain helps them organize their thoughts with teacher input; Elaborate applies learning to new contexts; Evaluate supports reflection. This sequence replaces the traditional “lecture–practice–test” model with a more layered and flexible approach. It provides structure for abstract content and supports continuous learning.

3.3. Focus on Learning Process and Assessment

The 5E model values diverse assessment methods and focuses on student growth during the learning process. It encourages tools like self-assessment, peer feedback, and group presentations. In the Evaluate stage, students not only review what they learned but also reflect on how they learned, including their collaboration and problem-solving. Teachers can adjust instruction based on these reflections, forming a feedback loop that improves both teaching and learning.

4. Reform Strategies for Applying the 5E Instructional Model in Educational Psychology Courses

4.1. Optimizing Instructional Content through Problem-Based Design

Teaching objectives should not be limited to students’ mastery of theoretical knowledge. It is also important to help students transfer and apply what they have learned. In practice, many students struggle to integrate and apply knowledge, mainly due to the lack of problem-driven instructional design based on real educational contexts.

The 5E instructional model addresses this issue by using real problems to draw students’ attention and stimulate reflection. Each teaching unit should be built around a core problem that is rooted in primary school settings and involves contextual complexity and cognitive challenge. This central problem should guide all five stages of the 5E model, leading students through the process of exploring the problem, understanding the relevant theories, and applying these theories in similar contexts. For example, in the unit on learning motivation, the core problem might be: How should a teacher motivate students who show low learning interest? The unit would integrate theories such as achievement motivation, attribution theory, and Maslow’s hierarchy of needs. Through classroom observations, case analysis, and intervention design, students would complete tasks aligned with each stage of the 5E model. This helps deepen their understanding of the theories and strengthens their ability to apply them in practice. In this approach, problems are not auxiliary to teaching—they are the starting point, thread, and goal of student learning.

4.2. Enriching Teaching Design through Task-Driven Learning

In a problem-based teaching framework, the design quality of learning tasks directly affects classroom effectiveness. It is essential to ensure that tasks are engaging, appropriate, and cognitively challenging. Without well-designed tasks that align with the central problem, students may lose motivation, and the effectiveness of the 5E model will be weakened. Tasks should therefore be clearly aligned with the problem, appropriately difficult, and support knowledge construction. They should also be integrated into all five stages of the 5E structure to ensure coherence between teaching content and learning objectives.

Across the five stages, tasks should be arranged according to their instructional function to form a progressive and transferable learning structure. In the Engage and Explore stages, exploratory tasks such as classroom observation, case analysis, and group discussion can be used to raise awareness and spark initial ideas. In the Explain stage, tasks should support students in clarifying key concepts, such as group analysis and error correction based on teacher input. In the Elaborate stage, transferable tasks should be provided, including lesson planning, behavioral intervention design, or simulated teaching activities to help students turn theory into practice. In the final Evaluate stage, self-assessment and peer review tasks can be combined with teacher feedback to guide student reflection, identify learning gains and weaknesses, and support the development of self-regulation skills.

4.3. Improving Formative Assessment to Support Learning Visibility

Under the 5E model, instructional goals shift from focusing solely on outcomes to emphasizing students' participation, thinking development, and competency growth. Traditional assessments that rely heavily on final exams cannot accurately reflect student performance across all stages. To align with problem-based and task-driven teaching, a comprehensive assessment system should be built—one that emphasizes formative assessment, supplements with summative evaluation, and highlights feedback for improvement. First, student performance in each of the five stages should be included in the assessment scope. For example, the originality of ideas in the Explore stage, the depth of theoretical understanding in the Explain stage, and the effectiveness of knowledge transfer in the Elaborate stage can all be evaluated to track learning progress and ensure authenticity.

Second, diverse evaluation methods should be adopted. For students, self- and peer assessments help develop awareness of their learning process and responsibility in the classroom. These methods allow students to gain insights not only from teacher feedback but also from giving and receiving feedback among peers. For teachers, process observation and qualitative feedback should be combined with task outcomes to offer actionable suggestions for improvement.

Finally, the formative function of feedback should be emphasized. Feedback should not merely identify right or wrong answers but serve as a tool to promote learning. It should help students understand what they have mastered, where they are struggling, and how to adjust their strategies. Teachers should highlight not only the problems in students' performance but also the underlying thought processes and reasoning. With repeated training, students can gradually develop self-monitoring and self-regulation skills, turning evaluation into an internal force for growth.

5. Conclusions

With the ongoing reform of basic education, the Educational Psychology course for primary education majors faces both new opportunities and challenges. This paper addresses current issues such as the disconnection between theory and practice, limited teaching methods, and insufficient assessment mechanisms. Based on the core principles of the 5E instructional model, it proposes three reform strategies: optimizing teaching through problem-based design, enriching instruction through task-driven activities, and enhancing student development through formative assessment. These strategies aim to promote deeper integration among instructional goals, learning processes, and student growth.

However, teaching reform is a long-term and systematic process. The effective implementation of the 5E model still requires continuous refinement and testing in broader classroom practice. Future research can focus on empirical studies to further evaluate the model's effectiveness. We believe that through ongoing exploration and application, the quality of Educational Psychology teaching for primary education majors will continue to improve and better serve the fundamental goal of preparing competent teachers for basic education.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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References

- [1] Liu, R.D.; Wu, X.C.; Yao, M.L. Reform of the Curriculum and Instruction of Educational Psychology. *Journal of Psychological Science*, 2004, 03, 753-754.
- [2] Hu, Y. Q. Exploring the Teaching Reform of Educational Psychology Course Based on the Cultivation of Applied Talents. *University*, 2021, 31, 116-118.
- [3] Wu, X.X.; Zhou, J. Exploring the Cultivation of Teaching Practice Skills of Teacher Trainees Majoring in Elementary Education. *Western China Quality Education*, 2023, 9(10), 30-34.
- [4] Bybee, R.W.; Taylor, J.; Gardner, A.; Scotter, P.; Carlson, J.; Westbrook, A.; Landes, N. The BSCS 5E instructional model: Origins and effectiveness. *Office of Science Education National Institutes of Health*, 2006, 1-80.
- [5] WULIJIRIGELA. Current Situation and Countermeasures of Teaching Reform of Educational Psychology Course in Colleges and Universities. *International Educational Research*, 2025, 8(1), 59-59.
- [6] Ding, J.; Huang, B.Z. A Research on the Reform of and Exploration into the Blended Learning and Teaching of the Educational Psychology in the Background of Teacher Certification. *Journal of Ningde Normal University(Philosophy and Social Sciences)*, 2022, 02, 92-100.
- [7] Kong C.W.; Hao W.R. Research On The Teaching Reform Of Preschool Education Specialty Based On The Deep Learning Theory From The Perspective Of Educational Psychology. *Psychiatria Danubina*, 2022, 34(S4), 608-608.
- [8] Huang T. Teaching reform based on students' learning phobia from the perspective of educational psychology. *CNS Spectrums*, 2023, 28(S2), S100-S100.
- [9] Luo, J.Z. Theoretical and Practical Exploration on Teaching Mode Reform Based on Educational Psychology. *Education And Teaching Forum*, 2024, 29, 121-124.
- [10] Sun T.; Zhang Y.Y. An Empirical Analysis of the Final Examination Papers in Educational Psychology Course for Undergraduates in Different Educational

Majors under the Background of Teaching Reform. *Journal of Contemporary Educational Research*, 2025, 9(3), 204-209.

[11] Bruner, J.S. The act of discovery. *Harvard Educational Review*, 1961, 31(1), 21-32.



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