Creating a Course Centered on Miniature Research Project-Based (MRPB) Learning

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Abstract:

Traditional Research Methods courses often rely heavily on textbooks, teaching each step of the research process in isolation. This approach can make the material feel disconnected, complex, and difficult for students to apply. To address these challenges, this study explored the effectiveness of a Miniature Research Project-Based (MRPB) learning approach, which integrates hands-on projects to teach research methods. The study involved 30 students, split into two groups: 15 in a traditional course and 15 in an MRPB-based course. In the MRPB course, students completed several small-scale research projects, each covering key elements such as introductions, research design, data collection, analysis, and conclusions. These projects were designed to be completed in one or two class sessions. At the end of the semester, all students wrote a research proposal, which was graded using the same rubric. Results showed that students in the MRPB class outperformed their peers in the traditional class, scoring an average of 96 compared to 87 ($p < 0.05$). The MRPB approach made research processes more accessible, engaging, and practical, allowing students to better understand and apply theoretical concepts. This method also increased enthusiasm for research and helped students connect academic content with real-world applications.