

The Impact of the Two-tier Mandala Combined with SCAMPER on the PBL Teaching Mobile Application Innovations

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Abstract:

Mobile technology and applications are a popular and rapidly developing field. There is an urgent need for talents with innovative abilities and problem-solving skills in this field. In a highly competitive world, you can think innovatively and adapt to changes regardless of society, enterprises, or individuals. It will be a big help to win in the future. Therefore, how to inspire students to design innovative service applications through systematic creative thinking is the problem this project aims to solve. This study combines the two-tier Mandala with the SCAMPER in PBL teaching. Through the two-tier Mandala thinking method, students can break through the traditional thinking framework, challenge existing concepts, and generate more creative ideas. Then, through the SCAMPER method, students can use the two-tier Mandala thinking method to examine the output from multiple angles, quickly identify and analyze potential flaws and room for improvement in creative ideas, and help students Comprehensively reflect on and refine their creative solutions, enabling them to generate more complete, creative and in-demand solutions. This study will integrate differences among using the general brainstorming method to learn, the two-tier Mandala thinking method to learn, and the two-tier Mandala combined with SCAMPER to learn. Consider the differences in learning styles, learning motivation, creative learning effectiveness, creative self-efficacy, innovative behavior, and reflective ability before and after the course to provide more specific and in-depth teaching improvement suggestions.

Keywords:

Problem-based learning, Mandala thinking, SCAMPER, Brainstorming, Innovative Ability.