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Effect of Problem Posing Teaching Strategy on Prospective Physics Teachers' Conceptual understanding and Problem Solving Behaviour in Some Selected Concepts of Physics

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It is pertinent to consider appropriate alternatives means of imparting knowledge so as to defend quality science teaching and learning from going into extinction when the need arises. Among these alternative is the use of problem-solving strategies that involve different problem-solving activities like learning through open ended such as problem posing. Problem posing improves students' problem-posing activities, reinforce and enrich basic concepts, foster more diverse flexible thinking and preconceptions. Based on this, the study determines the effect of problem posing teaching strategy on prospective physics teachers' conceptual understanding and problem solving behaviour in some selected concepts of physics. The objective of the study is to find the effect of problem posing teaching strategy on different categories of problem solvers (experts and novices) conceptual understanding and problem solving behavior in some selected physics concepts. The design adopted for the study was mixed method and the sampling techniques was multistage sampling techniques. This sampling technique enables the categorization of the prospective physics teachers into experts and novices problem solvers. The area of the study was Bauchi State. Instruments used for data collection are Physics test for conceptual understanding (PTCU) and physics test for problem solving behavior (PTPSB), developed by the researcher based on the concepts work and energy. The data was analysed using descriptive statistics and qualitative approach. The findings indicate that experts' prospective physics teachers' conceptual understanding is logically organized according to schema with systematic problem solving behaviour, while novices' prospective physics teachers' conceptual understanding is hierarchically organised with random mode of problem solving behavior. It was recommended among others that teacher educators should adopt problem posing teaching strategy in teacher training programme for flexible and systematic thinking that enhance skills acquisition.

Apply to be considered for a student award (Yes / No)?

no

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reasoning, experience, thinking, qualitative, meaningful

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