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## The use of constructivism in teaching mathematics in secondary classes by prospective teachers

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In teacher development programmes conducted by the National Colleges of Education (NCoEs) in Sri Lanka, the commonly used teaching-learning theory is the constructivist approach. The NCoE curriculum has been prepared to implement the teacher development process based on a student-centered teaching-learning methodology. Therefore, it is totally dependent on the constructivist approach. Here, we investigated how the prospective teachers who follow secondary mathematics courses at two NCoEs used the theory of constructivism in teaching mathematics during their teaching practice. Among all the 19 NCoEs in Sri Lanka, only these two NCoEs conduct both Sinhala medium and English medium secondary mathematics courses. The prospective teachers are expected to use the constructivist approach in which teachers play the role of a facilitator. The mixed-methods approach based explanatory sequential design was used in the research. The first phase was a survey using a questionnaire and the sample included 160 prospective secondary mathematics teachers in two NCoEs. In the second phase, focus group interviews were used. Findings revealed that though 93% of prospective teachers believed that they were familiar with student-centered teaching. A significant percentage (24%) did not use constructivist learning principles and practical activities in their teaching of secondary mathematics. However, findings of the interviews revealed that a number of prospective teachers did not use constructivist principles in mathematics teaching as they found it easier to plan and deliver teacher-centered lessons. Therefore, prospective teachers need to be given sufficient theoretical knowledge about constructivist practices in pre-preparation programmes at NCoEs. Adequate mentoring and continuous reflection of prospective teachers by their supervisors are essential to ensure the continuation of constructivist principles in teaching mathematics.

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