

Effectiveness of the learning cycle strategy meta-cognitive science concepts and thinking skills beyond the cognitive development of the Biology students department at Prince Sattam bin Abdulaziz University.

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Abstract:The study aimed to identify the effectiveness of the use of learning cycle metacognitive in the development of scientific concepts and develop thinking skills and metacognitive the female students in the Biology Department, Prince Sattam bin Abdul-Aziz University, and detecting the correlation between the development of scientific concepts and the development of metacognitive thinking among students of the Biology Department, Prince at the University of skills Sattam bin Abdulaziz. Was used in the study, an experimental curriculum similarities, The study sample included 62 students from the Biology Department, which represents all members of the community study 1436/1437 AH. They have been divided into two groups, one experimental and consisted of 32 students, which was implemented by the experience, and the other control group consisted of 30 students, and the tools of the study is the scientific concepts of scale, and the scale and metacognitive thinking skills. The results showed a statistically significant differences at the level of 0.01 among the middle-level students the experimental and control groups in the post application to test the scientific concepts, for the benefit of students in the experimental group, and the presence of statistically significant differences at the level of 0.01 among the middle-level students the experimental and control groups in the post application to measure thinking skills beyond knowledge, for the benefit of students in the experimental group. The emergence of positive statistically significant relationships between the development of scientific concepts and the development of skills and metacognitive thinking among students, and was a stronger relationship between the monitoring and control skill of the skills and knowledge behind and between the scientific concepts of development thinking. Researcher recommends the need to use a learning cycle metacognitive teaching scientific concepts, and attention to the practice of female students thinking skills and metacognitive while performing scientific activities.

Keywords: *learning cycle, metacognition, thinking skills and metacognitive.*