

*Abstracts*

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### **The effects of computer-assisted instruction on Misconceptions about photosynthesis**

One of the purposes of science education is to make students learn concepts meaningfully. Concepts are not concrete objects, events or things that we meet in our daily life but abstract facts exist in our mind. That's why it is hard for the students to learn these concepts effectively. The concept of photosynthesis is one of the most important subjects of the biology that is hard to understand. The purpose of this study is to investigate the effects of computer-assisted instruction in high schools on 11th grade students' misconceptions of photosynthesis. This study was implemented in two different classes of the same teacher with 53, 11th grade students in 2001-2002 academic year, in a normal high school in central Trabzon. The misconceptions were found out through a test including 13 open-ended and multiple-choice questions. The questions of the test were developed by checking related sources and by consulting to the biology teachers' ideas. Firstly the test was given to the two groups as a pre-test. After computer-assisted instruction; the same test was implemented to each group as a post-test. According to the results, it was found that computer-assisted instruction is more effective than traditional method on meaningful learning of the concepts related to photosynthesis. In the light of findings, some suggestions were made.

**Keywords:** Computer-Assisted Instruction, Biological Education, Photosynthesis and Misconceptions

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### **Objectives obtained by science student teachers in "examining of subject curriculum" course**

As it is known that the structure educational faculties has changed since 1998-1999 academic year in Turkey. A new course "Examining Subject Curriculum" was developed one of the result of this innovation. Although content of the course is given, intended instructional objectives and implementation process of the course are not indicated in detail in the related documents. This course was implemented first time to 187 science students teachers divided in four group in Karadeniz Technical University at Fatih Faculty of Education in 2001-2002 academic year winter term. Curriculum development, the importance of curriculum material in teaching-learning process, strategies, methods and criteria used in examination of textbooks and other written materials were discussed in the 2 hours per week theoretical lesson. Science student teachers completed 5 home-work projects during 2 hours per week practical period of the course. The purpose of this study is to determine the level of obtained objectives of the course. Action research methodology was employed in this study. Open ended questions, students teachers projects and observation of presentation of the projects were used to collect data. Data collected from this study revealed that most of the students obtained the curriculum development process, develop criteria for examining the given written document and the importance of the examining textbooks. This research was completed with some recommendations regarding to the course implementation and content of the required projects for lecturers, teachers and researchers

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### **Developing an activity based model for Turkish physics student teachers in teaching practice**

Although the structure of faculty of education has changed recently in Turkey, research has not been conducted on the current activities implemented during the teaching practice. The purpose of this study is to develop an activity for physics student teachers implemented in teaching practice. A literature review has been done to examine teacher training approaches and the developmental stages of student teachers in developing countries. Field work was conducted 1999-2000 academic year. Study sample consisted of 4 method tutors and 45 physics student teachers in Fatih Faculty of Education and 15 mentors from Trabzon province. A case study methodology was applied in this research. Data collected by using questionnaire and observation from student teachers and interviews from mentor and method tutor. Data showed that especially six activities such as observing lesson, teaching lesson, preparing yearly and daily plan, teaching lesson in laboratory, assessment of student achievements were used in teaching practice. 16 activities were determined and stages in implementing these activities were presented by means of diagrams. It was concluded that, in spite of shortages of the existing activities, if mentors were well trained about teaching practice developed activities will be implemented more efficiently. It is believed that an activity based model to be applied by mentors can easily be used to equip the student teachers in teaching practice with professional skills and abilities.