

[P27] Teaching problem solving in biochemistry: a blended learning approach featuring computer-based formative assessment

***Les Jervis and Loretta Jervis**

School of Biological Sciences

University of Plymouth

*l.jervis@plymouth.ac.uk

Developing students' problem solving abilities is a key part of higher education in science disciplines and in higher education in general. Problem solving is often defined as a key 'skill' that is valued highly by employers of graduates. However, the definition of problems by employers is rarely specific and can range from the banal to the highly complex. Within the context of individual disciplines, such as biochemistry, it is usual to consider a hierarchy of 'problems' according to the level of academic development of students. Individual students will take very variable lengths of time before they become familiar with particular types of problems and develop a facility for working through them to solutions. Providing students with workbooks has long been an established approach to dealing with the different rates at which individual students progress. The development of on-line materials allows flexible access and immediate feedback to support student progress on problem solving. When faced with a new type of problem, students usually have few ideas about how to approach them. After they have been guided through to solutions, they can then deal with similar problem types by application of an appropriate algorithm. By using on-line problems with feedback, staff-student contact time can be focussed on the initial introduction of students to new problem types after which students can improve their abilities to deal with those problem types on-line. In this poster we will summarise the

approach we have been developing using the TRIADS/Authorware system and present an evaluation of its effectiveness.