Chapter 12
Engaging the Students in Activity Based Learning for Future Employability

Margaret Ross
Southampton Solent University, UK

Geoff Staples
Southampton Solent University, UK

Mark Udall
Southampton Solent University, UK

ABSTRACT
The paper discusses the introduction of Activity Based Learning for professional issues for undergraduate students in the School of Computing and Communications at Southampton Solent University. Its aim is to assist the students with their final year project and future employability. The use of the university’s learning environment, based on the Moodle open source software as a key component of the Activity Based Learning, the preparation by the students prior to the tutorials, and the group work within the tutorials are described. The views of the students on this approach are discussed. The paper describes how the students become more self-reliant and self-motivated in their learning approach. This will be of direct benefit to them in maintaining lifelong learning in their future profession.

INTRODUCTION
This paper describes and partially evaluates the development of employability within the curriculum of the School of Computing and Communications. It proposes that employability should not be considered in isolation but as part of a closely integrated and holistic range of interventions and should be part of the ethos of the curriculum in Higher Education.

Activity Based Learning is a learning intervention that has been used in various forms within the Faculty of Technology for a number of years and draws from earlier work on formative assessment (Robinson & Udall, 2006) and the independent learner (Udall & Robinson, 2004).
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It has been deployed at Master level (Protheroe et al., 2008) at Southampton Solent University, and on the undergraduate foundation level 0 in various forms, and has now been extended to the undergraduate programmes within the School of Computing and Communications.

Activity Based Learning has an extensive range of features focusing on different aspects of student learning, which will not be discussed in detail here, however this provides an overview, starting with four key goals:

- To improve student attendance and their participation in the learning experience
- To break learner dependency on declarative knowledge from tutors and hence promote learner independence
- To promote the development of functioning knowledge (Biggs, 2003) and higher order thinking skills
- To provide a mechanism by which learners are able to make judgments about their own progress in their studies

These goals are reflected in a core structure to Activity Based Learning around which variants are designed. The learning experience is structured as a series of ‘activities’. These activities are conducted in small groups and focus on the solution of a problem often drawn from a real-world context.

The activities are facilitated by the tutor who spends the majority of their time in conversation with members of the groups (other than setting the context of the activity at the beginning and facilitating feedback at the end). The activities are specified in terms of a set of smaller tasks and intended learning outcomes. In order to successfully participate in the activities learners are required to undertake some preparatory tasks. Fundamentally these are designed to help learners to acquire the domain knowledge needed to successfully complete the activity. The tasks are usually research based and may be mediated through a Virtual Learning Environment incorporating some form of formative feedback. Learners are also required to undertake some form of reflective exercise, in relation to the intended learning outcomes, which requires them to make a judgment about their own participation and success (Robinson & Udall, 2006). In short the learning experience is built around a cycle or preparing, doing and reflecting. This may be augmented by a recording process that is used by learners to monitor their own progress across the duration of their studies (Udall & Robinson, 2004). The curriculum structure maps onto the goals as shown in Table 1.

PROFESSIONAL ISSUES

Prior to 2008, the Professional Issues unit, which included ethical, legal and working practices, was covered in a more conventional manner. This included a mixture of individual tests and group reports with group presentations. The unit also included discussions on a weekly basis of articles relevant to the unit, the course and the students’ future employability (Colomo-Palacios et al., 2010; Trigo et al., 2010). The university’s learning environment was used to provide the students with a brief synopsis of the articles as well as links to the full articles. It also provided access to the conventional learning material for the unit. Automatic links to BCS (British Computer Society) news was provided for the students. The students’ views were regularly sought (Isaac et al., 2006) to identify changes in their views of professional issues, in a longitudinal study.

The revalidation of all the computing courses in 2008 provided an opportunity to introduce an Activity Based Learning Approach. This method has been used successfully for several years with the computing students on various courses. It was decided to double the length of the unit, and to move the unit from the final year to the second