TEACHING AND LEARNING IN HIGHER EDUCATION

Moofik Al-Tai
Staffordshire University

ABSTRACT: The success of Higher Education (HE) Institutions depends on the success of their students and the quality of the student learning experience will increasingly be a key determinant HE institutions success in the context of the emerging competitive higher education landscape. The HE institution's Strategic Framework for Learning and Teaching reflects the HE institution's ambition to support students to be successful at each stage of their engagement with them - from first contact through to successful entry into employment.
This paper explores effective ways of teaching and learning in higher education. It focuses especially on teaching and learning to achieve equality in diverse student access, and to achieve equity and fairness in student success and outcomes from higher education.
This paper will also deal with the current higher education teaching and learning issues and challenges. It will consider issues relating to various methods of learning including class room based learning (face to face learning), e-learning, work-based learning and distance learning. E-learning is well suited to distance learning and flexible learning, but it can also be used in conjunction with face-to-face teaching, in which case the term blended learning is commonly used. HE institutions may explore these learnings in order to improve their students' success.

Keywords: Teaching, learning, higher education.

INTRODUCTION

Higher Education students should have the opportunity to develop the study skills and outlook necessary to support their currency with their chosen subject throughout their future careers. To this end the HE institution's learning and teaching strategy aims to provide a resource based learning environment with an emphasis on student opportunity rather than simple direct teaching. Each student is a partner in the learning experience and is expected to take responsibility for his/her study. The HE institutions should lay emphasis on the role of the lecturer as a learning facilitator who enables the student to take a responsibility for her/his own learning.

Student learning opportunities include e-learning, classroom-based learning; work-based learning and distance learning. These learnings involve a broad spectrum of activities appropriate to the learning outcomes and the assessment methods. These activities range from entirely self-managed study, timetabled formal lectures, tutorials, laboratory based work and presentations. Students have opportunities to use and develop theoretical knowledge, computer based models, and to design, implement and test. The transferable skills of presenting, writing, discussing, working with others, and managing one's own time are developed throughout the programme of study.

Practical work is an essential feature of many programmes of study and may take place in a number of settings including the computer laboratory or classroom. Practical work is required for preparation, assessment and other course work. As students' progress, directed reading becomes more demanding in line with the intellectual development required at all levels.

Students are encouraged to undertake independent learning to extend the material presented. The value of self-gained knowledge and understanding is emphasised both as an essential skill/practice for lifelong learning and as an expectation on professionals to continue their professional development.

E-LEARNING

E-learning is the use of electronic media and information and communication technologies in education. E-learning is broadly inclusive of all forms of educational technology in learning and teaching. E-learning is inclusive of, and is broadly synonymous with multimedia learning, technology-enhanced learning, computer-

based instruction, computer-based training, computer-assisted instruction or computer-aided instruction, internet-based training, web-based training, online education, and Virtual Learning Environments (VLE). These alternative names emphasize a particular aspect, component or delivery method.

E-learning includes numerous types of media that deliver text, audio, images, animation, and streaming video, and includes technology applications and processes such as audio or video tape, satellite and computer-based learning, as well as local intranet/extranet and web-based learning. Information and communication systems, whether free-standing or based on either local networks or the Internet in networked learning, underlay many e-learning processes[1].

WORK BASED LEARNING

Work Based Learning (WBL) is a modern way of creating Higher Education (HE) level learning in the workplace. Its special work-linked features enable learning to be centred and take place throughout the working environment [2].
WBL involves HE institutions, students and employers working in partnership to provide high-quality learning for students. This includes a wide range of practice, ranging from fully-integrated WBL programmes, through work placements and practice-based learning, to the accreditation of employer provision by HE institutions [3].
WBL can help employees in making career decisions, developing job skills relevant to future employment, achieving a recognised academic qualification, enhancing their academic knowledge, achieving a recognised academic qualification and improving their personal and professional development [4].

As the HE institution builds relationships with employers, they must then transfer the appropriate information through materials. These materials represent the knowledge the HE institution holds that must be given to the students on the programme and employers themselves. With this knowledge employers can develop an understanding of the programme of content that will be given to their employees. The employees themselves will be able to have this foundation of understanding and then use the teaching materials to learn the programme of content and fully understand the subject in which they wish to build and develop their knowledge.

DISTANCE LEARNING

Distance Learning is a modern way of studying for an undergraduate, Master or PhD degree courses without actually being on site at the students chosen HE institution by using new technology in the delivery of subjects associated with these courses, including the use the VLE through the Internet.

Instead of attending lectures, students study online, attending 'virtual' tutorials and submit their assignments over the Internet. They can be in the same country as the HE institution, or overseas.

Distance learning gives the students the opportunity to study through a university that they would not necessarily be able to attend due to their physical location, or to fit study around work or other commitments.
Distance learning, presentation and interaction with materials must be approached in an alternative way to when students are regularly attending the campus, and on site at teaching locations. When a student is on campus, they are learning in direct contact with the Higher Education (HE) institution and academically trained members of staff that can facilitate their learning with their direct knowledge and supporting materials. However, a student who is off campus, and receives the course programme through means of distance learning, learns through another channel, and must therefore have materials that cater to the fact they are in a remote location.

Distance learning does not always meet the requirements of courses such as Engineering and Technology related courses where the physical classroom attendance is mandatory to complete the course. In this case a blended learning may be required.

BLENDED LEARNING

Blended learning is a combination of face-to-face learning, online assessment and feedback, mediated instruction (E-Learning) and traditional study methods, as illustrated in Figure 1 [5].

Because of the face-to-face learning sessions, blended learning can be applied to engineering and technology related courses which require a significant amount of laboratory based work in order to satisfy the accreditation requirements by professional bodies.
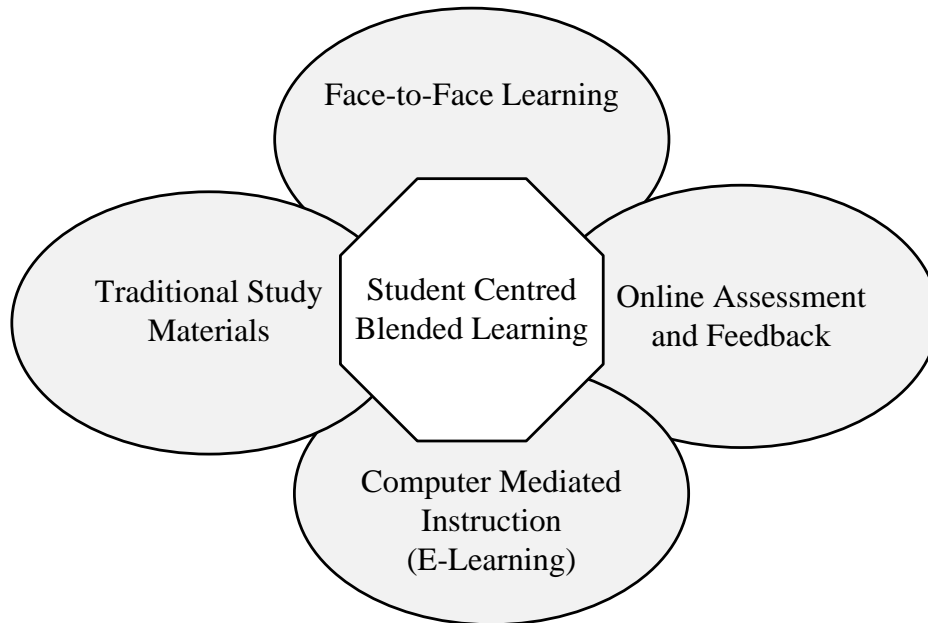
Figure 1: Blended Learning Model

LEARNING MATERIALS IN DISTANCE LEARNIG ENVIROMENT

There are four means in which materials work in the distance learning environment:

(a)   Material-Based Learning
This is where learning resource materials made available to the students by the course programme for the sole basis for their understanding of the course content.

b)   Direct Communication
Materials may also be provided in the situation where learning is supported from the HE institution remotely from the student.

(c)   Lecturer Delivery in the Students Place of Work
Another option would be for the HE institution to physically send relevant staff to the employer at regular intervals to deliver the materials.

(d)   Virtual Learning Environment
The VLE is a system which changes the way materials are delivered. The VLE is designed to facilitate the delivery of course programmes to students, through providing a means in which the students can learn without having to be in the classroom.

LEARNING OPPORTUNITIES

Examples of good learning opportunities with reference to relevant assessment methods are presented below:

Laboratory assignments / practical work / log book records / reports - Computer based exercises - Simulation exercises:

Many learning opportunities are provided by practical work of some form. This occurs for example in laboratory based assignments for which students maintain a log book (whilst they are in the laboratory) and produce a

report. The practical work may take the form of undertaking experimental test measurements, building items of technical equipment, undertaking design work, implementing web-based or other computer-based or media-based code or solution, or implementing an individual design project. Technical instruction and support should be available wherever appropriate. Generally practical work is linked to theoretical concepts and analytical skills developed in lectures and tutorials.

Presentations and oral examinations:

Opportunities are provided in assignments in which presentations, as well as project management techniques, team working, design and written reports, play a part.

Problem solving exercises:

Problem solving activities are normally undertaken by the students at all levels. As a formal component of subjects within the curriculum of the course, tutors set problems for students to tackle, and on which assessment may be based. The level of challenge ranges from fundamental knowledge to those that develop a deeper understanding. These are often generated entirely by the subject tutors based on their own experience.

Design tasks:

Design skills (if required by the course) should be introduced and developed through tutorials and problem solving exercises. Design requires knowledge and understanding, a requirement and specification, the tools and techniques to design, realise and test, and the project management skills to manage the process.

Individual projects and report:

Many courses require the completion of individual projects. Students may require to and produce a proposal, and final report. In this case students should review published literature and other relevant published works, and to set their work in the context of other work in the field.

ASSESSMENT MTHODS

The assessment methods used with the programme of study are varied, formative and develop students' transferable skills as well as their technical ability. Students' ability to plan, judge, communicate complex issues, solve problems logically, and develop original solutions, in appraising critically the work of others, and in managing their own learning are all significant contributors to determining a students' mark for a subject within the programme of study . In addition a student's technical understanding of the context of their work alongside that of others, of the breadth of their subject of study, and of the depth of their specialist area of study, also are key to the assessment process.

Assessment methods applied should include:

- Unseen examinations / class tests.
- Laboratory assignments / practical work / log book records / reports.
- Learning Portfolio
- Case Studies
- Presentations and oral examinations
- Problem solving exercises
- Essay assignments
- Assessments of work-based learning
- Design tasks
- Computer-based/Simulation exercises
- Poster displays
- Individual projects and reports and Graduate Show presentations

LEARNING RESOURCES

Many HE institutions have made substantial investments in information and learning technology and many have bespoke Learning Resource Centres which are curriculum-zoned. These resources enhance the delivery of courses in the classroom and remotely through the Internet.

HE institutions normally have an extensive range of journals; including those online and relevant to higher level study. A positive and distinctive feature is that students should be able to have access to the online learning resources of the institution.

FEEDBACK ON STUDENT WORK

There should be an agreed point of reference and common starting point between students and staff as to what constitutes the purpose and use of feedback as part of a learning process.

The feedback should generate a series of questions for the students which makes them think about their learning now, and what they need to do to develop their learning in the future. This will enable them to understand the purpose of the feedback in each specific context; create the capacity to developing evaluative judgment; the ability to review their own performance against professional and academic criteria; and to think about learning strategies they need to develop in the future.

The dialogue and understanding that emerges from the feedback should be applicable both to the current debate and also contain elements that are able to be translated to a range of current and future learning situations. As the student progresses through their learning journey they should be developing a more sustained and sophisticated approach to their learning, culminating in the expression of the graduate attributes appropriate to their level and subject specialism.

Feedback isn't simply an activity that takes place after assessment – it isn't something that is simply done to students! Feedback that is effective and timely occurs when students know when they need it, recognise what they want it for, and know how to ask for it in a way that is appropriate to their needs.. It is multi-faceted both in terms of content and format.

QUALITY ASSURANCE

HE institutions are responsible for ensuring that appropriate standards are being achieved and a good quality education is being offered.

Academic standards are a means of describing the level of achievement that a student has to reach to gain an academic award.

Academic quality is a means of describing how well the learning opportunities available to students help them to achieve their chosen programme of study. It is about making sure that appropriate and effective teaching, support, assessment and learning opportunities are provided for students.

ETHICS

Ethics is a set of principles to determine correct conduct. It is a system of moral values and moral choices made by the ethical person. It is based on moral values and rules and determines what is right and what is immoral. In the workplace, it is the rules or standards defining the conduct of a person, or members of a profession.

Handling ethical issues is an important element in many academic courses, in particular when undertaking work-based learning. Academic honesty and project integrity are vital to student's success. Students need to be aware of the skills needed to understand ethical issues.

When working in professions, the HE institution involved and the students must adhere to ethics and practices of the HE institution.

Ethical issues revolve around the importance and sensitivity of the materials and records of the business. It also includes the codes of practice required by the professional bodies and how the student responds and adheres to the code.

Within ethics confidentiality is an important factor. Confidentiality means holding information from an individual or about an individual throughout the professional relationship secure and secret from others. Confidentiality is seen as important to the maintenance of the relationship and the development of trust between individuals.

CONCLUSION

This paper has dealt with the current higher education teaching and learning issues and challenges. The paper presented methods, guidelines and procedures for teaching and learning in Higher Education.

It must be noted that, students on each course are different, and this must be reflected in the range and diversity in the materials provided. Teaching and learning must be supported depending on the course studied, with the level of materials equal to the level of the course. Materials developed and delivered must take into account that courses will undoubtedly place a great emphasis on all types of learning and the materials should take this into consideration.

When HE institutions deliver courses by distance learning they need to make sure this type of learning may not always meet all the teaching and learning needs and blended learning may be required.

Focused attention should be given to ethical issues and relationships connected with teaching and learning. HE institutions and students must adhere to ethics and practices of the HE institutions.

Good feedback on student work should create the environment whereby effective and productive learning is taking place, leading to the emergence of a flourishing learning community.

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