

HOW DOES ONE GUIDE THE LEARNER IN ONLINE LEARNING?

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ABSTRACT

The Internet has given Universities scope to implement a new type of learning and teaching medium. This has enabled greater access to course content for the learner, in both synchronous and asynchronous modes via computer-mediated communication (CMC). Online learning courses are aimed at people who prefer student centred learning allowing them to manage their own time within the constraints of a course. Giving students the ability to study from their home, the office or on the move makes these courses ideal for any person anywhere in the world. The focus of this paper is how does one guide the learner in online learning, ensuring the greatest benefit is gained.

Keywords

Online learning, e-learning, e-facilitation.

1. INTRODUCTION

Portsmouth University's online learning environment provides access to education for those who are currently working and wish to update their skills and qualifications, enabling the student to fit their study around their work. Portsmouth offers four postgraduate degrees online, which focus on IT and business disciplines.

The system is available 24/7 encompassing both synchronous and asynchronous elements. Synchronous sessions are structured scheduled sessions with the e-facilitator, which are archived, but there is also the ability to have unrecorded synchronous sessions within the online community.

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"Every learner can at his or her own choice of time and place, access a world of multimedia material... immediately the learner is unlocked from the shackles of fixed and rigid schedules, from physical world which reacts to his or her own pace of learning". [1]

2. COURSE

The course is aimed at postgraduate students that have prior IT knowledge. This experience alleviates most problems associated with familiarisation of the learning system. These courses are taught entirely online; they are divided into two program routes of study a fast 18-month program and a 30-month program. The students decide which route to take based on the available time that they have depending on home and work commitments. The estimated average study time for each unit is 17 hours per week.

2.1 Student Profile

All students on this course would have gained an undergraduate degree or diploma in computing. Alternatively they would have had a considerable amount of work experience in the IT sector.

2.2 Unit Structure

The course is structured into eight taught units plus a research unit and a dissertation or project. Each unit lasts six weeks; each week focuses on a different part of the subject; every twelfth week examinations are run. Coursework is undertaken during the teaching period if required.

Each taught unit begins with an introductory video from the tutor. The course is broken down into six weekly lessons (figure 1); each providing a progressive structure, containing information on the chosen subject.

Web Client Programming Unit	UNIT PLAN
	1. Client-Side Programming
	2. Graphics
	3. Event Handling
	4. Advance Graphics
	5. Multithreading
6. Wider Use of Java	

Figure 1 Lesson plan for Web Client Programming (WCP) 2003

Each lesson is subdivided into three main elements:

1. An introduction to each topic area is provided, with directed reading and exercises to reinforce knowledge transfer. Each lesson contains a short question and answer section ensuring the key points have been covered.

2. The synchronous activity of a virtual classroom focuses on the weeks lessons, taking the key points and actively testing the students' knowledge with an open question and answer session. These sessions are archived for students to revisit at a later date.

3. The lesson concludes each week with a discussion question that is posted; this is aimed at consolidating the week's lesson. Here the students then have the opportunity to share ideas and exchange views asynchronously via the discussion boards.

Each lesson is structured to provide short intensive study sessions that promotes further student centred learning.

3. HOW THE LEARNER ASSIMILATE THE CONTENT

As the learner progresses through each lesson, they have the opportunity to post any queries on the discussion board. Each unit will have an e-facilitator who reviews the discussion boards and answers any academic questions. The e-facilitator manages the threads of the notices that develop on the discussion boards. Although the student requires an immediate reply to their question, this may not be possible. It is vital that the learner is informed that the question is being dealt with.

Each week there will be a synchronous session referred to as a 'virtual classroom'; these are scheduled for the duration of one hour each week. This medium offers a real-time tutorial session that is archived for reference. The e-facilitator will focus on the key points of the lesson. The aims of these sessions must be clear to the learner. The session must keep to the plan; it is easy for a learner to dominant the session therefore it is vital the e-facilitator maintains control. The fundamental issue here is the real-time interaction of the online

community, as e-facilitator it is imperative that this interaction is encouraged.

4. THE LEARNING MODELS

Combine this model the teaching and learning online CMC model of Salmon [8] with the learning model from Rousseau [9].

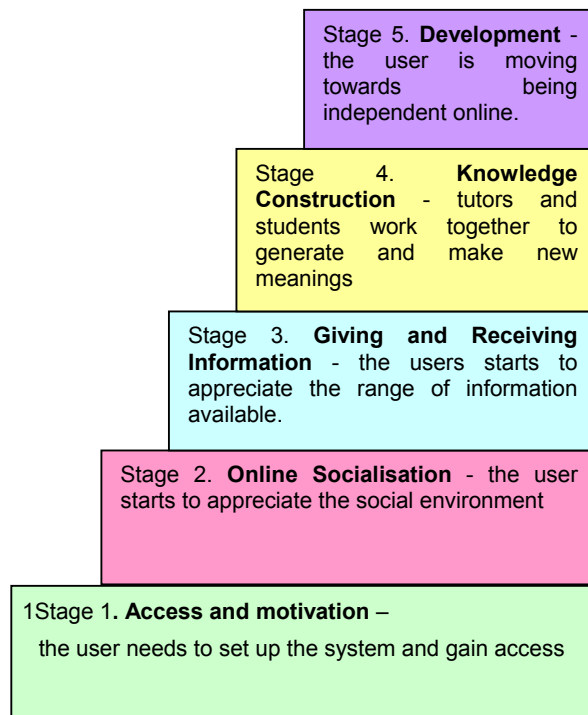


Figure 2, The teaching and learning online CMC model of Salmon (2000)

- Principle 1** - Most elements of a subject domain can be learned
- Principle 2** - Access to a subject expert may be needed for some elements of a subject domain.
- Principle 3** - Learning is designed to be problem centred
- Principle 4** - Learning is progressive
- Principle 5** - Learning requires practice

Figure 3, The learning model derived from Rousseau

The first stage for the student's online experience is to gain access to the system and its contents, as defined by Salmon [8]. This will necessitate the student familiarizing their selves with the environment. It is paramount that this process is not fraught with problems; students that develop problems at this stage will be starting the course demotivated before even accessing the content.

“The best time to get students involved is at the beginning. If they are in at the start, working with the issues of the course and influencing the way it runs, they will feel that the course belongs to them and the energy and motivation from this will carry them through.” [4]

All lessons for the duration of the course are available to the student from day one enabling student centred learning. To be able to participate in the synchronous sessions effectively, the slower learners have to complete a certain amount of the course to actively take part in the synchronous and asynchronous sections.

4.1 Principle 1: Most elements of a subject domain can be learned

“An estimated 70 percent of adult learning is self-directed learning” [3].

Given access to the appropriate material a learner can learn most things given the motivation to do so. The online environment is just a median that presents this information and in so doing provides the learner with a structure (figure 4). This structure will supply the building blocks in a progressive nature to comply with the learning outcomes of each lesson. The material of each lesson provides the foundation to build further knowledge; it is most effective if the content contains references to other sources of information. The lesson content is only one element of the online learning process. Maslow [6] infers that people will only learn what they want to learn. Therefore each lesson concludes with a self-test section that provides probing question to reinforce knowledge transfer of the key elements within the subject.

Web Client Programming Lesson 1	Client-Side Programming	LESSON PLAN
		Lesson Overview
		HTML and the Internet
		What is Client-Side
		Client-Side Applications
		Client-Side Languages
		Client-Side Java
		Developing Java Applets

Figure 4 Web Client Programming Lesson Plan

4.2 Principle 2 - Access to a subject expert may be needed for some elements of a subject domain.

The e-facilitator should be a subject expert; as an online learning environment is more open and all communication is recorded the importance of accurate information is paramount. The distinctive part of online learning is the interaction between students and the e-facilitator. A lecturer’s role of

developing the learning environment in the classroom is no less important in an online environment. Facilitators need to build the online community-using teacher modelling as defined by Salmon [8]. The e-facilitators role is not only as the educator but also they have a nurturing role to play.

Will the student that has experienced problems accessing the online environment be receptive to the learning process? This extends the role of the e-facilitator further to breaking down the barrier of these problems and enticing the student to focus on the learning. If the facilitator lacks confidence in their knowledge of the subject this will reflect in their communication with the students.

It is vital that the e-facilitator keeps in touch with their students. This could take the form of sending out messages periodically to encourage participation; this will embrace those students that are not very active to feel involved with the whole process. It is imperative that the e-facilitator provides feedback to the students; they need to be able to consolidate their knowledge. Experience indicates that it requires more work to maintain communications with online students then with ones on-campus.

“Provide positive feedback and reinforcement in both messages to individual and conference comments to the group, especially for their early efforts and periodically after that. Be sensitive to the needs of the participants. Create a context conducive to thought, creatively and self-esteem Demonstrate that their contributions are valued. Reward positive contributions”. [5]

Mason [7] infers that the role of the e-facilitator is diverse and therefore, combines elements of educator, chairman, host, facilitator and community leader.

4.3 Principle 3 - learning is designed to be problem centred

Assigning study questions at the end of lessons utilizes reflective learning. If the e-facilitator is to teach reflectively, they must help students expose inadequacies in their own knowledge. The online community all contribute to solving these problems promoting a stimulus for learning via synchronous and asynchronous activities. The interaction that results from this promotes self-directed learning with the e-facilitator guiding the direction of the thread.

“The learners have someone available from whom they can get an individual response to their queries or new idea and from whom they can get a challenging alternative perspective. In return, they can contribute likewise to other colleagues’ learning (and themselves learn in the process of doing so)”. [10]

As the solution evolves and disseminates throughout the online community the student further

interrogate this by posing further questions on the discussion boards that they don't understand. This exchange and collaboration of information adheres to stage three of Salmon's [8] online learning and teaching model. Students begin to gather information as they work to solve the problems posed

"According to cognitive-interaction psychologists, a learning problem is not merely an objective issue to be resolved; it must involve psychological tensions in the learner" [2]

4.4 Principle 4 - learning is progress

The online structure must provide a progressive approach to learning. Unless there are pre-requisites stated for the course being studied there should be no assumed knowledge. The e-facilitator needs to provide a motivational element to sustain the learning process.

The lessons are structured to incorporate the foundation knowledge for the subject with directed reading incorporated in the lesson to provide a deeper source of information.

Each lesson offers a discussion question, which will be addressed using the discussion boards. This is where the learning community would interact with each other and the e-facilitator providing answers and further question on the topic. It is vital that the feedback from the e-facilitator is positive and accurate providing corrective response where necessary.

Each week the participant will interactive synchronously via a virtual classroom, where the e-facilitator will provide an online tutorial. During the virtual classroom session you need to be selective about the focus of the subject and concentrate on the key points to gain optimum learning transfer and to consolidate the students knowledge.

Through daily interaction and review, the e-facilitator guides the student to a thorough understanding constructing their knowledge of the subject. Similarly this relates to Salmons model at stage four when the students attain knowledge assimilated from the information.

4.5 Principle 5 - learning requires practice

The well known saying is 'Practice makes perfect', the students have to take on board the information to understand how first; the gap between theory and practice requires a transition from simply understanding learning and acquiring knowledge to actually applying the knowledge. In line with Bloom's taxonomy the e-facilitator nurtures the learner through the unit material encouraging them to achieve higher cognitive levels of learning.

The facilitator has to provide the information in a structured progressive manner. This will take into account the background of the target cohort so the information will be feed at the appropriate rate and level. It is vital that the facilitator provides feedback and guidance to the students.

5. CONCLUSION

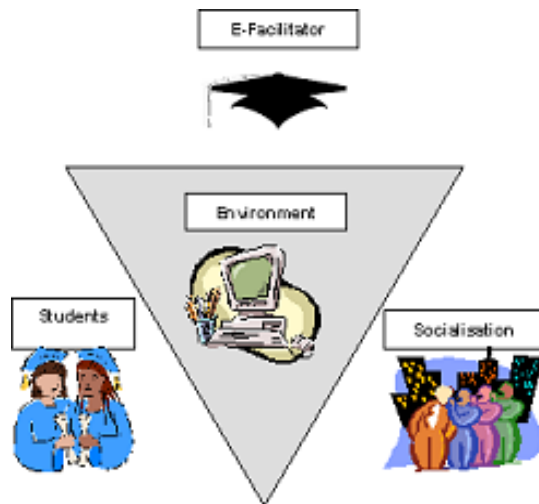


Figure 5 The Learning Community

The skills required to design and facilitate an effective online learning course is reflected in both models from Rousseau and Salmon; it transpires that the interactions of all elements are as vital as each other. Each stage of these models combines the socialisation of the student with each other and the e-facilitator. This interaction is dependant on the environment that it is served by. If you eliminate one element of this interaction then the learning process will suffer or not take place.

Figure 1 illustrates this conception; if you take away one of the three main elements of the triangle then the balance is tip and the learning process will fall down. Alternatively if the environment is flawed, the interaction medium is ineffective as a learning tool, therefore the socialization is prevented and learning is affected. This applies equally to individual students as it does to the whole cohort.

The e-facilitator must be conscientious with their responses to the students when using the synchronous and asynchronous communication tools. The personality and capabilities of the e-facilitator are assumed by their communications with the students. Without the luxury of visual indicators the students can construe these communications not as the e-facilitators intended. This will hinder the effectiveness of the learning process.

The e-facilitators role of building the learning community is vital. If the e-facilitator is not confident

with the e-learning environment then the learning will be affected. The students will gain some knowledge but the deeper learning required may be lost. When the online community is active the learning process is working.

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