

“An examination of the learning regime employed on a Digital Media Access course and immediate and proposed strategies for its improvement.”

A critical exploration of the students’ attitudes towards the implementation of online mechanisms for communication, collaboration and enquiries in an Access to Digital Media course, and its relevance to the improvement of the students’ learning, participation, involvement and achievement on the course.

for

Part-time PGCE (Post-compulsory)

Unit 3 “Teaching and Learning with post-16 students”

submitted by

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Introduction and background (to the writer and title topic)

I started working as a multimedia teacher three years ago. I had no previous teacher training or relevant experience at the time; I had a degree in graphic design and a Masters degree in interactive multimedia, and some professional experience in web design.

In my experience as a student of multimedia and software engineering, and in my practice as a multimedia lecturer, I find it contradictory that the use of online learning resources such as computer-mediated-communication (message boards, online forums) is almost inexistent in this kind of course; computers are mostly used as a tool for the production of assignments, computers are simply the machine where people learn how to use specific software or to write up essays, but they are not actually explored as tools for the enhancement of teaching and learning. It seems strange that courses that prepare people for the production of this kind of applications don't actually implement and use them as part of their course delivery.

The issue – what prompted me to choose this topic (rationale)

This research focuses on a group of students I teach from an Access to Digital Media course at City and Islington College in London. This course is of particular interest to me, as I myself was one time a student of the course (five years ago, before doing my MA). I therefore know the course both as a student and as a teacher, which gives me a very good perspective on the kind of issues that affect the performance of the students in the programme.

The Access to Digital Media course is designed for adults (19+) who do not have the standard entry qualifications to apply directly for degree courses; it covers a range of topics that vary from artistically orientated modules such as traditional animation and graphic design, to very technical ones like, for example, programming for the web. As such, the Access course reflects a substantial part of the multimedia industry; this is intentional in that complementary degree courses will inevitably build on this process, equipping the learner with a head start over many of their prospective contemporaries, a point borne out by visiting undergraduate admissions tutors, who come to deliver recruitment presentations.

However, precisely because of the multi-disciplinary nature of multimedia, the course often attracts students from very different backgrounds who have a wide range of skills and interests. Some people come to the course because they want to learn programming, whereas others are more interested in the artistic side of multimedia. It is difficult to deliver a course that necessitates the learning of so many skills and disciplines that are seen as diverse, often resulting in the students becoming frustrated or discouraged with certain components of the course.

One of the central tenets of the course is to give students relevant information and practical experience in all areas of multimedia; we try to encourage them to understand and get involved in those areas in which they do not consider themselves proficient, with additional optional modules for students who want to specialize in specific areas of study. Students come to the course with different levels of expectations and prior knowledge; the students' experience in particular areas of multimedia has never been systematically incorporated into the course structure. I feel there is a need to promote areas of mutual collaboration among the students, with multimedia resources (computers, internet) being used in a more intelligent and innovative way to promote and facilitate learning.

I have been teaching on this course for the last two years, and from my own observations (both as a student and a teacher) and the information provided by course team colleagues, it has been established that there has been an unchanged pattern of relatively poor retention (compared to national benchmarks) for the last five years. Different measures have been adopted to develop a flexible working strategy to address this issue and to improve students learning on this course, and this paper explores my own contributions to the team efforts to improve the course delivery.

Currently, I am responsible for a two hours per week workshop. Initially the idea for this workshop was to assist students with any problems to do their coursework, as a complement to the taught sessions delivered by other tutors. Given this context, it was clear for me that the workshop was an excellent opportunity to try new approaches in my

teaching, then I decided to explore the idea of building a collaborative online environment with the help of the students.

My intention here was to provide the students with the necessary mechanisms to have more control over what they wanted to learn and also encouraging them to participate more actively in their learning process, by using principles of situated learning (Lave and Wenger, 1991), and taking into consideration the impact of self-schemas and self-regulation in the learning process (Garcia T. and Pintrich P, 1991). This strategy fits within the course team's effort to improve retention and achievement in the course.

Literature Review and background

The theoretical framework for my research focuses on Communities of practice and the role of self-schemas in motivational and cognitive learning models.

Jean Lave and Etienne Wenger's model of situated learning proposes that learning involves a process of engagement in a 'community of practice'; they claim that learning is not an individual experience and that is not the sole result of teaching, but rather that learning is a social activity and that it comes from our experiences and interrelation with other people.

According to Etienne Wenger (1998), a community of practice defines itself along three dimensions:

What it is about – its *joint enterprise* as understood and continually renegotiated by its members.

How it functions - mutual engagement that bind members together into a social entity.

What capability it has produced – the *shared repertoire* of communal resources (routines, sensibilities, artefacts, vocabulary, styles, etc.) that members have developed over time. (see, also Wenger 1999: 73-84)

The essence of a community is that it develops around things that matter to people, and it is based on the involvement of its members in a set of relationships over time (Lave and Wenger 1991: 98). Communities organized around a particular activity or area of knowledge gives members a sense of identity and joint enterprise. For Lave and Wenger (1991), a successful community of practice generates and appropriates a repertoire of ideas, commitments and memories. A key element of communities is practice, ways of doing and approaching things shared by members of the community.

My argument is that by providing the Access to Digital Media students with tools that facilitate the construction of a course community, by working collaboratively online the students are at the same time benefiting from the experience in specific areas of multimedia that other students may have (so the teaching is not restricted to the information provided by the teacher, but becomes a collaborative experience), and at the same time gaining practical practice in their field of study of which one of the main components is the production of online content.

The use of computers and the internet in a multimedia course shouldn't be limited to the learning of software applications, but should be incorporated as a structural and collaborative element of the production and delivery of the course content. Online education “introduces unprecedented options for teaching, learning and knowledge building” (Harasim 1990a, 17) and can help “create communities of enquiry capable of stimulating intellectual, moral, and educational growth among rich and poor alike” (Cummins and Sayers 1995, 9)

Garcia and Pintrich study on self-schemas and self-regulatory strategies, (1994) highlight the role of self-concept and self-schemas as the connecting element between motivational (why we do things) and cognitive (how we do them) models of learning. Self-schemas are concepts of ourselves in different situations, and our idea of self-concept in relation to different situations is formed by the activation of some of those self-schemas.

Self-schemas are organized in four dimensions:

Affective:	Temporal:	Efficacy:	Value:
Positive or negative self-conceptions	Developmental perspective, allows the existence of past, present and possible selves.	Perceptions of instrumentality and control	Importance or centrality of the self-schema.

Directly related to self-schemas is the idea of self-regulation strategies, which are defined by Garcia and Pintrich (1994) as: “affective laden processes related to the individual’s self-schemas and goals”. An essential subset of these are the four *motivational* strategies detailed below.

Self-handicapping	Defensive pessimism	Self-affirmation	Attributional theory
Creation of obstacles to success in order to maintain self-worth and positive self-schemas	Anticipatory strategy involving high effort due to the activation of negative self-schemas	Reactive strategy to failure events and negative selves	A mode of responding and attributing causes to events.

I argue that the incorporation of multimedia tools and computer-mediated communication into the delivery and development of the Access to Digital Media course will provide the learners with the requisite tools for participation, such as equipping them with a sense of identity as useful members of the group, resulting in incremental motivation and helping in the generation of more productive self-regulation methods.

In her book about teaching and learning online (1995), Linda Harasim outlines the ways in which computer mediated communication enhance traditional teaching and learning methods:

- **Text Based:** Forces people to focus on the message, not the messenger; makes thinking tangible; forces attentiveness; and is socially equalizing, i.e.: everyone appears the same in text.
- **Asynchronous:** The 24-hour classroom is always open; plenty of time for reflection, analysis, and composition; encourages thinking, retrospective analysis; the whole transcript discussion is there for review, e.g. "What important questions weren't asked?"; class discussion is open ended, not limited to the "end of period".
- **Many To Many:** Learning groups of peers facilitate active learning, reduce anxiety, assist understanding and facilitate cognitive development; resolving conceptual conflict in the group yields new insights.
- **Computer Mediated:** Encourages active involvement as opposed to the passive learning from books or lectures; gives learner and teacher control; interactions are revisable, archivable and retrievable; hypermedia tools aid in structuring, interconnecting and integrating new ideas.

- **Place Independent:** Not constrained by geography; panoptic power: collaboration with global experts online and access to global archival resources; access for the educationally disenfranchised.

Method

Subject profile:

The subjects in the study were 28 students divided in two groups of 14; students range in age from 19 to 53 and represent various ethnic backgrounds. This year the students are predominantly male and only 45% have English as their mother tongue. Of the students whose first language is not English, 6 are down to be receiving English support, but when I checked with the tutor I was informed that only one of them is attending the sessions regularly. Two of the students are deaf and a professional signer assists them during the lessons. The students are all computer and internet users with different levels of expertise.

Table 1.1

Country of origin	Male students	Female students
France		1
Brazil	1	1
Turkey		1
Italy	2	
China	1	
Cambodia	1	
Dubai		1
UK	15 (of which 8 are of black ethnicity)	3 (all of them of black ethnicity.)

The workshop sessions:

The workshop sessions are divided into two sections. The first part of the workshop session is for the students to work on their assignments with the help and assistance of a tutor, me. Assignments are not given out for this module and students can decide what they work on as far as it is part of the coursework. The second part of the workshop is a half an hour group discussion on topics related to multimedia. The topics covered during the length of the research were:

- Understanding terminology, a definition of multimedia and interactivity, and
- Story boards in multimedia design

Students were asked to propose topics for future discussions.

At the beginning of the workshop session students from both groups were asked to discuss the course and the assignments that they were currently doing and to raise any problems or concerns regarding those assignments, the tutor would then address any common problems and then see each of the students individually to help them with any problems, very often software related but sometimes in relation to storyboarding, visual communication or essay writing.

This module requires a lot of collaboration among tutors, as I need to constantly be informed of assignments and topics covered in the other lessons to be able to provide efficient assistance to the students.

Three weeks into the course the first online learning resources were implemented; these consisted of an online form that the students use to send requests of topics to be covered in the workshop session, and an online message board where students post open questions and participate in discussions of topics related to the coursework and to multimedia.

In general, the questions posted are mainly technical, asking for help with specific software applications, or guidance for finding resources. Examples of students' postings are:

“When is the deadline for the study skills essay? Has everybody finished?”
“How do I create a mask in Photoshop?”
or “Who knows of a good site for Flash tutorials?”

Answers are mainly provided by other students and sometimes by the tutors themselves. Guidelines for use and appropriate behaviour (netiquette) were introduced with the implementation of the forum, a password is required to gain access to it, and messages are posted with the student name so that people can easily be identified. This is done to help manage the site and to make sure it is not used for purposes that are not relevant to the course.

Postings **submitted** by students are discussed during the workshop session and students are **actively** encouraged to participate in it with questions or answers to the current discussions.

These online resources are intended to serve as a complement and preparation for the workshop sessions, with the hope that they will contribute to equal participation among students and to the building of a collaborative environment of work, where students develop an individual and group identity, working under the principles of communities of learning enunciated by Lave and Wenger.

Procedures:

For the purpose and length of the research data gathering (4 weeks), only one group had access to the online facilities, the other group was used as a control group and continued working in the traditional face-to-face classroom-based way.

The data for this research were gathered using different methods and in three main stages:

Information about students' attitudes towards the Internet and their Internet usage was gathered using field notes. As part of the first workshop session, the students were asked to introduce themselves to the class and were asked questions regarding their internet use, their likes and dislikes about the internet, their favourite website, their reasons for studying multimedia and their previous experience in visual design and/or programming.

The second part of the study was conducted in the second week of the course during a normal class session when the students had already been given a number of assignments from the other tutors. The students were randomly assigned to work in pairs and were given a worksheet based on a “Motivated Strategies for Learning Questionnaire” -

MSLQ (adapted from Pintrich, Smith, Garcia, & McKeachie, 1991) (see app.1) with several questions to assess students' motivation, learning strategies, and perceived level of participation in the course. Students were asked to take turns to interview their partner and complete the worksheet with the information gathered and then they were asked to give suggestions to their partner as to how to improve their learning strategies. The worksheets were then collected for data analysis.

A third phase of the information gathering was done two weeks after the form and forum stage; students were asked to fill an online questionnaire individually; the questionnaire being similar in scope and content to the one they had done in pairs at the beginning of the course, and the data was later compared with the initial findings.

Data and Data Findings:

The key findings obtained from the different stages of the research are:

From the first stage:

- The vast majority of the students use the internet for entertainment purposes
- They key judge a website for the quality of the information, but most importantly for the amount of control and personalization that they have over the content.
- All of the students use email regularly, and some chat rooms, but only two of them have been involved in online discussions or thematic message boards.
- A number of the students have experience working on different areas of multimedia including:
 - Visual design
 - Computer programming
 - Sound
 - Prototype testing

From the second stage:

There was not a significant difference in the answers provided by the two groups, the key findings were:

- Some of the students perceived their level of participation in the course as not equal and dominated by a few, this as a consequence of the following:
 - The teacher and some students did most of the talking
 - Students suggestions and ideas were not taken into account by the course members
 - Shyness
 - Students were busy working at their workstations and didn't have time to have discussions with the other students
 - Language constraints
- Students were in their great majority sceptical of the usefulness of the workshop module
- Students who were generally confident with their chances of success in the course, also had a more independent attitude towards learning and didn't rely too much on the teacher's input, all scored high in the use of learning strategies. This type of student represented 42% of the course.
- Students who found the pace of the course too fast, and the difficulty of the assignments too high also ascribed to the teachers a greater level of responsibility in their success on the course, with the majority of the students falling into this category.

- Only a small minority of the students could relate what they were doing in their assignments to other assignments and to outside projects.
- Students were finding it difficult to complete assignments on time
- In case of difficulties most of them reported that they would ask the teacher as the first resource, and then their course peers.
- Students' use of study strategies was very low, but students reported they were trying to apply some of the things learned in the study skills module.

From the third stage:

There were clear distinctions here in the answers provided by the two groups:

	Group using online resources	Control group
Study attitude – Intrinsic motivation.	There was a considerable increase in students motivation from their assignments, they found the course challenging and were willing to participate.	There was a much smaller increase in students' motivation; students reported difficulties appreciating the contents of the course.
Study Attitude - Interest	Students had some difficulties recognizing the importance and usefulness of some of the modules and found others highly interesting, but still were interested in finding future uses to the skills they were learning.	Students had difficulties in finding concrete applications of the things learned in the course, they were interested in multimedia but weren't sure about the importance and usefulness of some of the coursework.
Study Strategies - Elaboration - organization	Students were using some forms of elaboration like analogies and paraphrasing, they were all familiar with mind maps (which they learned in the study skills module). Students used graphics and tables to organize information.	One of the students in this group had a very good at using elaboration as a study strategy, using mind maps and flash card, but she was an exception, the majority of students used elaboration from time to time but didn't do it in a consistent organized way.
Study Strategies - Critical Thinking	Students enjoyed being challenged by discussions, and used critical thinking skills some of the time. Some students reported problems engaging in discussions, especially those whose mother tongue wasn't English, and they said they sometimes felt frustrated that they couldn't defend their arguments appropriately.	There wasn't a significant difference in the use of critical thinking of this group from the answers of the other group.
Study Strategies – Self Regulation	There was a small increase in the use of self-regulation strategies, students reported that they planned and monitored their learning.	Unchanged use of self-regulation strategies compared with the findings from the second stage of the research.

Discussion of the data

Conclusions, recommendations

Firstly the study demonstrated a tendency toward more equal participation after the implementation of online modes of communication, it especially helped those students who had a low participation rate in face-to face discussions. Students whose mother tongue wasn't English and the deaf students reported online message boards gave them more opportunities for participation.

A computer lab is not the most appropriate environment for collaborative work. Students tend to work in a very individualistic way and the current set-up of the classroom doesn't lend itself to group work, which means that very often they don't take advantage of the knowledge and skills of other course members. Sharing knowledge between them improved their motivation and attitudes towards the course. The degree to which an individual feels competent in an endeavour will directly influence the level of motivation and performance in that endeavour (Covington, 1992; Schunk, 1991). The message board needed constant monitoring, and on a few occasions the solutions proposed by students to a specific problem were not the most appropriate. Nevertheless, they helped in the construction of spaces where the students could see themselves not only as learners but also as teachers or helpers of their peers' learning, providing a high level of perceived competence, this shift of roles is proving to have a very positive result in their performance on the course in general.

I see great potential for the implementation of online resources for communication, collaboration and enquiries for the Access to Digital Media course and similar courses. The course in general benefited from the inclusion of a simple online form, an asynchronous many-to-one way of communication between the students and me, that allowed them to send their requests for the workshop session in advance, and for me to be better prepared for the sessions and to afford them useful assistance. The students also reported that the online form is easier to use and more convenient than an email application, (the use of email applications is banned in the college). Requests in advance give me time to prepare more adequate resources for the specific needs of the students, and has changed the students' perception in relation to the usefulness of the lesson, as they can see that their opinions are being taken into account.

Even though there was not a particular improvement in the students' self-regulation strategies I think it is too early to draw conclusions in this area. It would be interesting to come back to this point later on in the course (as a longitudinal study?) when students have gained more confidence and have had more time to define their goals, and when other components of the online facilities are implemented. The proposed components are:

- Week by week course content available online
- Links to resources (e.g. tutorials, universities, multimedia contests) and references pool feed by members of the course
- Personal customisable web page for each of the members of the course
- A personalized calendar with the dates when assignments are given and with the set deadlines, and where students can add their own notes on the dates.

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Append 1.