Essay Inspired by H800 TMA-01

Robin Taylor

Week I Activity 9:

There is a valid argument to make that paper, pen and the symbolism and conventions used in writing and drawing are valid 'technologies', where as most of the time 'technology' is used to mean 'computers' and 'connectivity'. For instance, I continue to maintain that the 'best' learning that I have ever done has been on zoology field trips, but one would have to be very broad in one's definition to consider what 'technologies' are enhancing the learning experience. After all the environment is already 'there'. It would be different if there was say an electronic 'field' to explore that could help people gain the experience of going to the field and doing the learning exercises. One of the new products to come from Google Labs in this respect is Google Ocean. Co-launched by famous aquanaut Sylvia Earle, students can travel around the globe and under water to find out about the topography under the ocean and learn about research projects that have occurred there.

This activity was a surprise to me because I found that the way that I was taught and the way that I normally teach (more process and participatory) is different to the way that I mostly learn now (information acquisition). I have not figured out why this should be so.

This task may have been more relevant if it was geared towards doing an actual learning activity using a 'traditional' method and then doing another which is 'technology-enhanced' and getting me to consider the differences from there. Perhaps one of the ways that this could have been done is to have each tutorial 'wiki-group' actually construct a wiki that is related to the contrast between participation vs. acquisition and making a final commentary on the construction of the wiki.

Week II Activity 2

Citizens' Science and Citizen's Journalism: This is really an extension of some of the ideas of virtual 'field trips' that can occur except it's a 'real' sense of data gathering and then using the internet to collate and share data. I've been involved in something like this where a large cross cultural psychology experiment had co-researchers around the globe give out a questionnaire devised by the original researchers (with some adaptation to the local context, e.g. language changes).

This does bring up the 'power' of the technology to do extended joint research work. However, it seems to me that it also raises considerable ethical concerns, such as when the 'co-researchers' are being used without effective or considerable recognition). Although the

Although there was an invitation to join in the Snail project, it's relevancy particularly in the form of feedback and so on, was geared mainly towards UK residents.

It seems that the only way to really understand this issue would of course to have joined up and taken part in some kind of citizen's science or journalism. However, for the purposes of this course where time is critical this would not have been realistic. Furthermore, it would seem that really one would become engaged in the activity if there is a passion for whatever the topic or issue is – after all some may find the topic of the evolution of snail shell coloration rather 'slow'. Perhaps one might have asked us as students to have chosen from a selection of potential (MOADE vetoed) citizen science or journalism ventures to sign up and participate for the duration of the course and to have used this as a source of activities to comment on throughout the course.

Week V Activity 5

Although the concept of using multi-media with visuals and sound seems obviously something that is engaging, the Wesch video *The Machine is Us/ing Us*, seemed like a perfect vehicle to demonstrate something on a more visceral level. I looked at this video a number of times trying to figure out what it was that made me appreciate it so much. Taking the sound out did have a qualitative difference but I was so engaged with the topic that I found myself just as engaged with the sound off as with it on. It may have been different if I had started watching the video without the sound and then watched it with the sound. No doubt about it though the sound made a visceral difference with it's beat 'pulling' you through the video. I was inspired enough to go to some considerable length (on my slow connection speed) to watch the Library of Congress speech that Wesch gave explaining what he was doing with the video and then moving onto his participatory ethnography. It gave a much better feeling for the topic of what Web 2.0 was. In this sense the first video peaked my interest enough to go onto the longer presentation.

The O'Reilly text in contrast was denser in terms of factual information. As text it allows the presentation of information to be taken at a more leisurely pace because it can be printed out and read at leisure. A number of us in the tutorial group (myself included) felt that the two modes were complimentary and not necessarily 'either-or'. One of us (Buendgens-Kosten, 2009) had a strong preference for the O'Reilly text compared to the Wesch video. This would suggest that if nothing else, well constructed technology-enhanced educational practices would recognise that the technology allows the same or related information to be presented in a variety of ways. Individuals can choose to 'consume' these different ways as either towards their own preference, or of course as a smorgasbord to pick and choose as they will. Of course the danger with this is that some means of delivering the information cannot convey the total information as another method can. One cannot for instance easily have music playing to support written text to give the same visceral response (positive or negative) as in a video.

One thing that could easily have made this task more enjoyable would have been to have loaded up a CD or DVD full of downloaded multi-media clips such as the Wesch video and the Library of Congress talk he gave. Whilst there are of course minimum requirements for us as students to take part in this course such has having a computer and internet, it seems that there are some basic restrictions that are forgotten about people who live

abroad and do not have access to both **fast** and **reliable** broadband internet connections. To view particularly the multi-media content I had to spend the best part of 2 days reloading and using complicated work arounds (using screen grabs) to catch the videos in a way that allowed me to review them effectively.

Acquisition vs. Participation

Easiest to understand is the Brown Collins and Duguid (1989) paper because it clearly sets out that the task of education is to be effectively 'practised' and not just demonstrated a verbatim or rote learnt recitation of facts and figures.

> Many teaching practices implicitly assume that conceptual knowledge can be abstracted from the situations in which it is learned and used […] this assumption inevitably limits the effectiveness of such practices. (Brown et al. 1989, p. 32)

Gardner (1991, p.3) cites a number of examples of honour grade physics students from MIT unable to solve simple problems presented in a slightly different format from the ones that they are used to. Similarly for mathematics, biology, economics, literary criticism and historical analysis. These students he claims, have been taught to answer the questions that are suspiciously more of a 'rote' learnt style where the students recognise only a distinct style of wording in the questions, which elicits a method of 'solving' the problem.

> Thus, students may pass exams (a distinctive part of school cultures) but still not be able to use a domain's conceptual tools in authentic practice. Brown et al. 1989, p.34)

This becomes part of the 'hidden curriculum' where pupils and students learn how to answer questions in a highly context specific way (the educational institution), rather than apply any 'authentic' understanding. This is relevant to the second activity that I've quoted (WII, A2) which suggests that citizen's science or journalism is hard to understand by simply visiting a project and 'observing'. The value of the approach can most effectively be looked at by actually participating in the activity. Normally it's the participation that gives the full richness of the experience and exposes the student to the 'real world' aspects that the actual workers are engaged in. The neatness of the text book illustrations disappear in the fieldwork of zoology students as they recognise that their mood, weather, equipment and skill in observing, drawing, communicating with their colleagues have a significant impact on the quality of the data that they are collecting (my 1st activity – WI, A9). Brown et al (1989) note:

> Old-fashioned pocket knives, for example, have a device for removing stones from horses' hooves. People with this device may know its use and be able to talk wisely about horses, hooves, and stones. But they may never betray-or even recognize that they would not begin to know how to use this implement on a horse. p33

Ana Sfard's paper (1998) argues that we often talk in metaphors when trying to understand an intellectual domain. For instance psychologist's understanding of the mind has used the metaphor of chemistry, telephone exchanges and computers as each of these technologies has come to the fore. Sfard argues that in education we tend to feel that there are two

distinct metaphors being used, that of *acquisition* of information or of *participation*. The latter is more akin to the Brown et al (1989) concepts, whereas the former is often associated with rote learning. Her basic argument can be stated as:

> As researchers, we seem to be doomed to living in a reality constructed from a variety of metaphors. We have to accept the fact that the metaphors we use while theorizing may be good enough to fit small areas, but none of them suffice to cover the entire field. (Sfard, 1998, p. 12)

Can Sfard's (1998) paper be taken as a rebuttal of Brown et al's (1989) position. I believe not. Brown et al (189), are not arguing that information in the form of facts and figures are irrelevant. They are instead arguing that they need to be considered in context. It may therefore behove us as educationalists to consider in which ways facts & figures are learnt best and which ways effective and ecologically valid practices are learnt best. Sfard makes the point that the use of metaphors allows us to consider what task we are actually engaged on whilst designing, or delivering our curriculum.

> Second, one may oppose the above classification of theories of learning by saying that most The relative advantages of each of the two metaphors make it difficult to give up either of them. (Sfard, 1998, p. 10)

With respect to the third activity (WV, A5), there appears to be clear allusions to what Sfard is trying to explicate because the two tasks were seen as either complimentary, or as a preferred choice, suggesting that people may either consider the task to be one in which information is to be collected (the *acquisition* model), or the very nature of the material and how it is accessed showcases the participatory processes that it is trying to explicate.

References

Buendgens-Kosten, J. (2009), Week 5, Activity 5, March 13, 9:09 AM.

Gardner, H. (1991). *The unschooled mind: How children think & how schools should teach*. New York: Basic Books.

Google Ocean, http://earth.google.com/tour.html#v=4 (accessed 14 March, 2009)

Seely Brown, J., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, *18*, 32-42.

Sfard, A. (1998). On two mataphors for learning and the dangers of choosing just one. *Educational Researcher*, *27*(2), 4-13.