Web-Based Learning: The bridge between student, industry and the future

National Diploma: Food Technology

Food Technology 1

John Mellem

Department of Biotechnology and Food Technology

Faculty of Applied Sciences

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1. CONTEXT

*Which current international and/or local trends are a trigger for your investigation?*

When one looks at the direction we are heading in future with our learners we need to realize that there is a need to reach the same level as our students. The advancements in the information technology sector is on the rise with new ‘innovative tools’ being released almost on a daily basis. We need to be able to relate our students with whatever means are available to us, thereby enhancing the learning experience, be it through *Facebook, Twitter, Skype* or even *You Tube*. Students are exposed to these means of communication and it appears to the norm. There is no need to write a letter when at the click of a button an e-mail or sms can be sent, why go to the effort of going somewhere to meet someone when we have video calls, these are the tools that we have available at our finger tips and they need to be used to their full potential.

2. CHALLENGES

*Which challenges and/or opportunities exist in your own teaching environment which you could possibly address through web-based learning?*

These are just a few key challenges faced by facilitators today. Of these the most important points are the limited interaction between individual students and their facilitator where there is no time for a one on one interaction the second important point is the limited resources available to students. These as well as the listed challenges are capable of being solved through the use of web-based learning. Especially the need for constant feedback for assessments and evaluation of the learning process which can be obtained timeously through the use of web-based learning. There is also the issue about computer literacy with the younger students being more comfortable with a web-based course than the older students (McKimm et al., 2003).
3. THEORY

Which educational theories seem most relevant to your investigation? Briefly describe each theory’s key characteristics. (Some examples are learning styles; blended learning; motivation; authentic learning; online assessment; online facilitation.)

**Blended learning** – This is an integrated strategy for attaining the objectives of teaching, learning and performance. This involves a combination of various approaches, such as, group discussions on the beach, coaching by a supervisor, self-study in a park, reference to a manual, online class participation, seminars and workshops and friendly discussions with colleagues (Mellem et al., 2009).

**Online learning (assessment and facilitation)** – This involves managing the teaching and learning interface through an online medium as well as place the learner at the centre of the learning experience. As the core of the learning experience, the learner is able to control what is learnt and ensure that the learning meets his or her needs and motivations (Mellem et al., 2009).

**Motivation** – Motivation is one of the contributing factors to learning. When we use the word motivation we are referring to creating conditions that instigate behavior. In an educational situation, learners would be motivated when conditions exist to assist learners to achieve peak performance. Motivation can be intrinsic or extrinsic. Intrinsic motivation is related to a person’s self-concept. Intrinsic motivation finds both its source and reward in its own exercise (Mellem et al., 2009).

**Authentic learning** – Learning by doing is generally considered as the most effective way for students to learn, especially when one considers the emerging technologies (communication, visualization and simulation) on hand making it possible to offer students authentic learning experiences (Callison and Lamb, 2004). Therefore one may define authentic learning as the alignment of student learning experiences for the world for which they are being prepared where the activities posed to students represent the types of complex tasks performed by professionals in the field, rather than far fetched theoretically based tasks (McKenzie et al., 2002).

I believe that all the educational theories are important and play a huge role in the development of a web-based learning course. None of the theories can function in a vacuum and rely on each other to achieve the optimum results from the use of e-learning classrooms.
4. METHODOLOGY

What is action research and how have you used the methodology's structure for your investigation?

Action research may mean different things to different people and reasearchers, but the brief assumptions of the contextual and conceptual framework and methodology of action research applied on improving practice in higher education will be used to define it. The dichotomy of the relationship between action and research or between theory and practice forms the starting point and leads to the dialectical relationship between action and research which are like two sides of the same coin (Mellem et al., 2009). Action and practical experience may be foundations of educational research and research may inform practice and lead to action.

The cycles of action research consist of four components viz. plan, action, observation and reflection. Plan – this involved planning of the classroom so that it encourages effective web-based learning instead of aimless surfing; Action – involved implementation, the classroom was assessed by a post doctoral student so as to obtain a non-biased assessment of the classroom; Observation – evaluation of the action by appropriate methods, tools and techniques was carried out through a questionnaire; Reflection means reflecting on the results of the evaluation and on the whole action and research process, which lead to the identification ea few shortfalls in the classroom (Woo et al., 2007).

By conduction action research one can constantly update the ‘classroom’ so as to keep abreats of new information and methods of getting the information across to students as well develop analytical and broad based knowledge.

5. DESIGN

5.1. The vision

What is the vision for your online classroom in the long term?

The vision of my classroom is not only to be limited to one subject or level (eg N.Dip: Food Technology: Food Technology 1), but rather to try and implement the knowledge I’ve gained from developing my classroom into all the other subjects. I also plant on using my current classroom as a stepping stone for a level four (B. Tech) course whci I hope to implement in the coming year (2009).
5.2. Active learning

*How will the online course encourage interaction/collaboration/engagement/participation/active learning?*

Many students feel intimidated to ask questions or give their own opinions on certain subjects, so in most cases we are left with a handful of students are only participate in lectures. An online class provides a sense of security for students where they are able to give their own ideas and ask that dreaded and feared ‘stupid question’ (Lombardi, 2007b). The discussion tool provides a means of participation and interaction from all students. The use of the media tool can send students into a virtual world with access to You Tube for example where possibly one can see something discussed in the classroom first hand, be a manufacturing procedure or even a laboratory test. This is especially beneficial to the student that has difficulty relating things heard about in the classroom to reality and industry, where if I were to show a student a picture of a square watermelon in class the first thing they would think was ‘photoshop’, but the use of the web allows me to show them just how one can modify a watermelon to grow square (Lombardi, 2007a).

5.3. Working smart

*How will you use this mode of teaching and/or the Learning Management System's capabilities to make your life easier?*

The use of an online classroom makes the problem of limited interaction between facilitator and students disappear, as the student is always in contact with facilitator from the first login. The online classroom also provides immediate and automatic feedback to the students and also relieves the need to constantly mark. Tests can be set with students answering online thereby reducing the amount of marking.

5.4. Blended learning

*How will "the blend" work? Consider how you could keep the best of both worlds, combining paper with electronic resources, and face to face interaction with online activities. (Don't throw out the baby with the bathwater...)*

I think that one can incorporate a conference call type of program into the online classroom. But the blend exists between the visual and the theoretical. Students can be exposed to media files that show them how different modules relate to real life examples. The Discussion tool provides the student with constant feedback not only from the facilitator but also fellow class mates leading to a greater interaction between students.
6. IMPLEMENTATION

6.1. Pilot activity

Describe the pilot activity you have tried out with one or two users (or your real students...not compulsory, but first prize!)

For my pilot activity I used a post graduate student who did not have any background in the field of Food Technology and a limited experience with the internet. This was so that I could get a true reflection of my classroom and how it would be received by a student arriving straight from a secondary education background and with limited computer skills.

6.2. Relevance

What is the relevance between this activity and the challenges and opportunities you have identified?

From this pilot activity I was able to identify with the challenges I listed and how an online classroom can overcome these. The ‘student’ also felt more at ease sitting behind a computer than if he were faced with a ‘sage on the stage’. There also appeared to a higher degree of contact as compared to if I were ‘lecturing’ from the front of a classroom. Already at this point I felt these were positive points.

6.3. Feedback

What feedback did you receive from users?

The user felt that the classroom was an ideal environment and especially liked the online assessment that one can use to test themselves after a module as well as the release of past papers only a few days before a test. The user also felt that by the being a media library with e-books they would stand a better chance of reading this rather than go to a library to look up a book. The use of You Tube (future addition to my classroom) and other media to show how the information in the learning modules links with industry was also considered to be extremely good.

7. REFLECTION

7.1. Assumptions

Which assumptions did you make and what did you learn from your assumptions after implementing the activity?

I assumed that my class would be perfect, but after the pilot activity although student felt that it was good, I myself found new ways of improving on what I had done. I always thought that once the class was developed the same class could be used each year with slight modifications, however to keep it ‘exciting’ not only for the student but also myself I realized that every year there shouldn’t only be slight modifications, but complete facelifts (Herrington et al., 2004).
7.2. Future adjustments

In the light of the feedback received and the lessons you have learnt, how will you adjust/adapt/change your activity and/or your classroom during the next action research cycle?

I feel that my classroom is lacking in that ‘WOW’ factor as a result of the limited time that I’ve had to concentrate on it. Therefore I need to update the entire classroom, add in more assessments that students could use, a broader glossary of terms, up to date journal articles relating to the course content in the media library. For the next action research cycle I plan on using 12 students so as to get a better idea on the classroom and then once again start the ‘cycle again’, action research doesn’t’ have an end because one should always strive to build on the past for a better future.

7.3. Impact

What impact do you envisage this intervention could make, or has made on either or all of the following: you, your learners, the curriculum and the institution?

The online classroom can bridge a gap that I think is widening between the student and facilitator. Many lecturers are in positions where they are in a comfort zone and are looking at the numbers for throughput and leaving many students with potential that just needs to be tapped to fall off the wagon. E-learning can overcome this as it caters for all levels of learning. If we were to take e-learning to the next level and have at least two subjects in each programme online I think that this would actually peak students interest in a subject. Once this is achieved you have an all round better environment for learning from the point of view of a student. The addition of e-courses may also increase the number of students

7.4. Lesson learnt

What lessons have you learnt overall during the year in which you have become an online facilitator?

Consider the postage stamp: its usefulness consists in the ability to stick to one thing till it gets there.

~Josh Billings~


