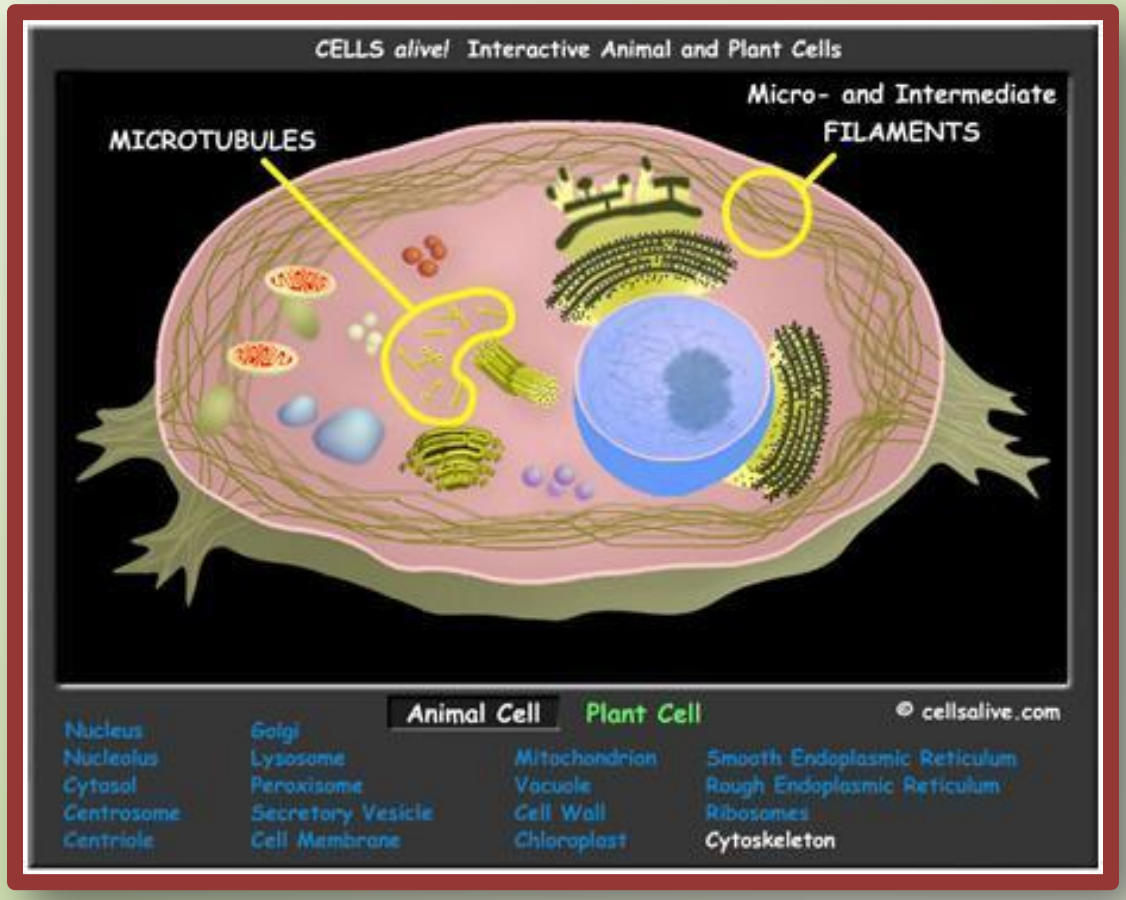
Evaluation of eLearning for Best Practice

The Smiley Approach to the Cellular Basis of Life

Final Report



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Executive Summary

This report expresses the results of an effectiveness evaluation conducted to evaluate the efficiency of an online project carried out as a requirement to complete the Graduate Certificate in Applied e-Learning at the Manukau Institute of Technology in 2010.

The report describes the usefulness and effectiveness of a number of online lessons about cellular basis of life designed for Foundation for Nursing and Nursing students at the Manukau Institute of Technology. The report also explores the various methods utilised to gather feedback, data and information to conduct the evaluation. Recommendations on how to improve and further develop the online lessons are also expressed.

The online lessons have been developed utilising Blackboard on eMIT. The lessons examine a general overview of a "typical living cell" in terms of structure, types and functions. The principal idea of the lessons is to do a step by step activity named "the smiley face approach". This approach was designed to assist students to have a better understanding of the various parts of the cell and how the various organelles interact with each other to maintain optimal requirements of the various activities the living cell performs. These lessons have been conducted by learning advisors at the Learning Support Centre (LSC) at the Manukau Institute of Technology. Learning advisors at the (LSC) assist students to develop study plans, expand their knowledge and enhance their memorisation to become independent learners. The approach was designed due to the fact that Foundation for Nursing students and first year Nursing students at the beginning of "Semester One" receive a relatively large amount of lecture material that can include a number of perplexing scientific terms. Among these lessons is a "living cell". A living cell can contain a multiplicity of minute structures that can be very confusing for some students, specifically older students who have no or limited science

background. The approach was designed to enhance students' learning in this regard. An effectiveness evaluation was conducted to evaluate how useful and successful the lessons (including the smiley face approach) are.

To conduct the evaluation, a number of approaches and tools have been used. Samples from different audiences were collected. These included lecturers, students from Nursing and Foundation for Nursing and experts in the fields of bioscience and e-learning.

An online survey has been established for students and lecturers to complete, which advises the learning advisors how useful and how clear the lessons are. Individual interviews were also regularly conducted with Foundation and Nursing students who visit the LSC. Advisors and lecturers were also advised to collect feedback as appropriate. Experts at the Technology Learning Centre also provided feedback.

The vast majority of enrolled students surveyed expressed that the lessons were effective and helped them understand the lessons thoroughly. Furthermore, many of them believed that the "smiley face approach" was particularly useful and assisted them remember the cellular contents efficiently. Additionally, some lecturers stated that they will continually encourage their BN1 students to visit the online lessons especially the smiley face approach.

Experts at the Technology Learning Centre stated the lessons were useful to Nursing students and the smiley face was an inventive approach to a difficult concept.

The highly positive feedback from users, lecturers and experts reflects the extent of the effectiveness and usefulness of the online lessons and the approach. Nevertheless, the lessons can be further developed and should be continually upgraded. Feedback also should be

continually collected to improve the services. More relevant topics should be included. Cellular contents should be depicted more realistically in terms of shape and structure. Golgi apparatus, for instance, is a pancake shaped structure rather than an oval shaped object. Students must approach the cellular contents and structure more practically and realistically. Functional misspelling should be urgently corrected. Furthermore, more effective tools for collaboration, interactions and discussions are highly recommended.

Background

Development of an online project about a topic of interest in a field of practice is required to complete the Graduate Certificate in Applied eLearning successfully. For this purpose a few online lessons have been developed on eMIT to support Nursing and Foundation students to have a better understanding of the cellular basis of life. The lessons examine a general overview of a "typical living cell" with regards to structure, types and functions. The main idea of the lessons is to do a step by step activity named "the smiley face approach".

Learning advisors at the Learning Support Centre (LSC) offer assistance in a wide range of areas to help students progress in a friendly educational setting to be able to succeed and achieve academic goals independently. Foundation for Nursing students and to a lesser extent first year Nursing students at the beginning of "Semester One", receive a variety of scientific terms and do a number of complex topics.

A living cell can contain a variety of microscopic structures that cannot be found in other living cells. This is due to a number of factors including locations they are found in and

function/s they are designed for (Marieb & Hoehn, 2010). This concept can be really perplexing for many students at the beginning of their academic study. This perplexity is particularly experienced by older students who have left school for a long time.

A simple approach has been developed to assist students to have a better understanding of the living cells in terms of shape, structure and contents. The approach was named "the smiley face approach" and has been perceived by many to be very easy, understandable and successful.

Below is a draft copy of the online lessons:

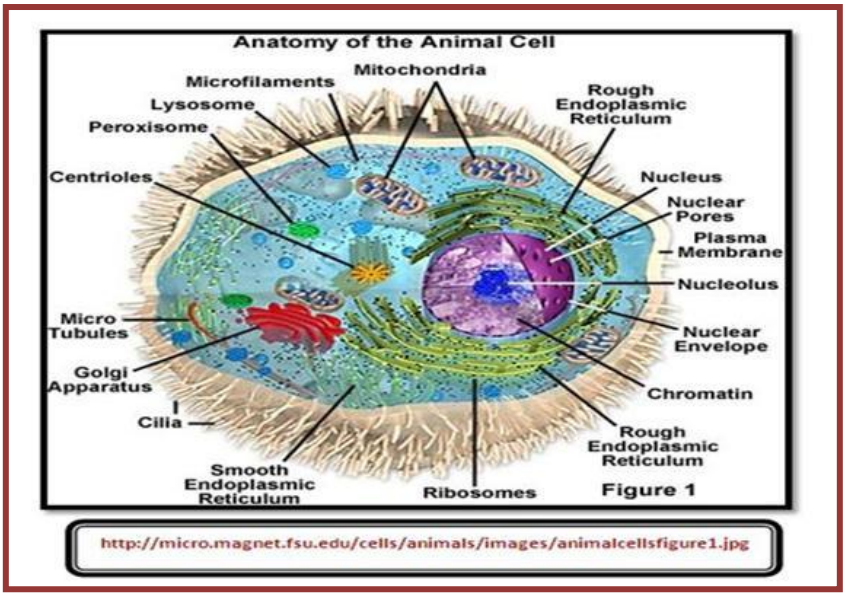
Mon, Aug 09, 2010 -- *The Living Cell*

Announcement

The materials included in these online lessons are to support you to have a better understanding of the cell and the various structures within it.

This eMIT course also enables you to ask questions using a discussion forum. Please feel free to contact me any time you need to know more about the contents included in this course. My details are found under the “Staff Information” section.

We may have a Wimba session at some stage in the future which would be announced here, on the announcement page.



The materials included in these online lessons examine a general overview of a "typical living cell" in terms of structure and function. Students will have a better understanding of the various parts of the cell and how the various organelles interact with each other to maintain best possible living circumstances of the cell and to provide optimal requirements of the various activities the cell performs.

The lessons include:

1- Overview of cells

2- Structure of cells

3- Types of cells

External links are included to describe the function/s of organelles as appropriate.

Please use the notes included in these online lessons together with your lecture materials and prescribed textbook.

Course Lessons

How to describe and define terms

If you randomly ask ten people to define or describe what water is, what do you think their responses and definitions would be? Well, their immediate reaction would be that they know what water is and they might think that it is peculiar to ask such a trivial question. Undoubtedly everyone knows what water is and everyone uses water massively in every single day of their life and we all utilise water for various purposes, but still how can someone be able to define terms scientifically and express knowledge academically?

Now let's get back to my question what water is and how can we define water academically?

Every time I receive a student or a small group of students at the LSC, I ask them this simple question and rarely students can put words together nicely and academically, but certainly they all tell me they know what water is but never thought of a way to answer questions like that academically. I don't want my students to tell me sophisticated scientific facts about water and what kind of reactions water can induce.

I ask them to give me a simple definition of water as if someone who has never seen water or heard of water would understand from their description of what water is.

Now my point is: How can we assist students to be able to define and describe items and concepts confidently and beautifully?

I have this approach which works most of the time and it can be summarized into two lists, the list of W and the list of S.

W: What, Where, Which, Why and When

S: Site, Size, Shape, Surface, Status, Specifications or Specific features, and Structure

Students to choose items from the list as appropriate.

Now let's get back to my first question, what is water? Let's use the lists of W and S:

What: Water is a chemical substance/compound.

Where: Water can be found everywhere.

Size: Water is found in large amounts in certain places such as seas and oceans.

Who: Water is used by everyone.

Site: location: where: everywhere

Structure: H_2O

Why: Water is used for a lot of reasons.

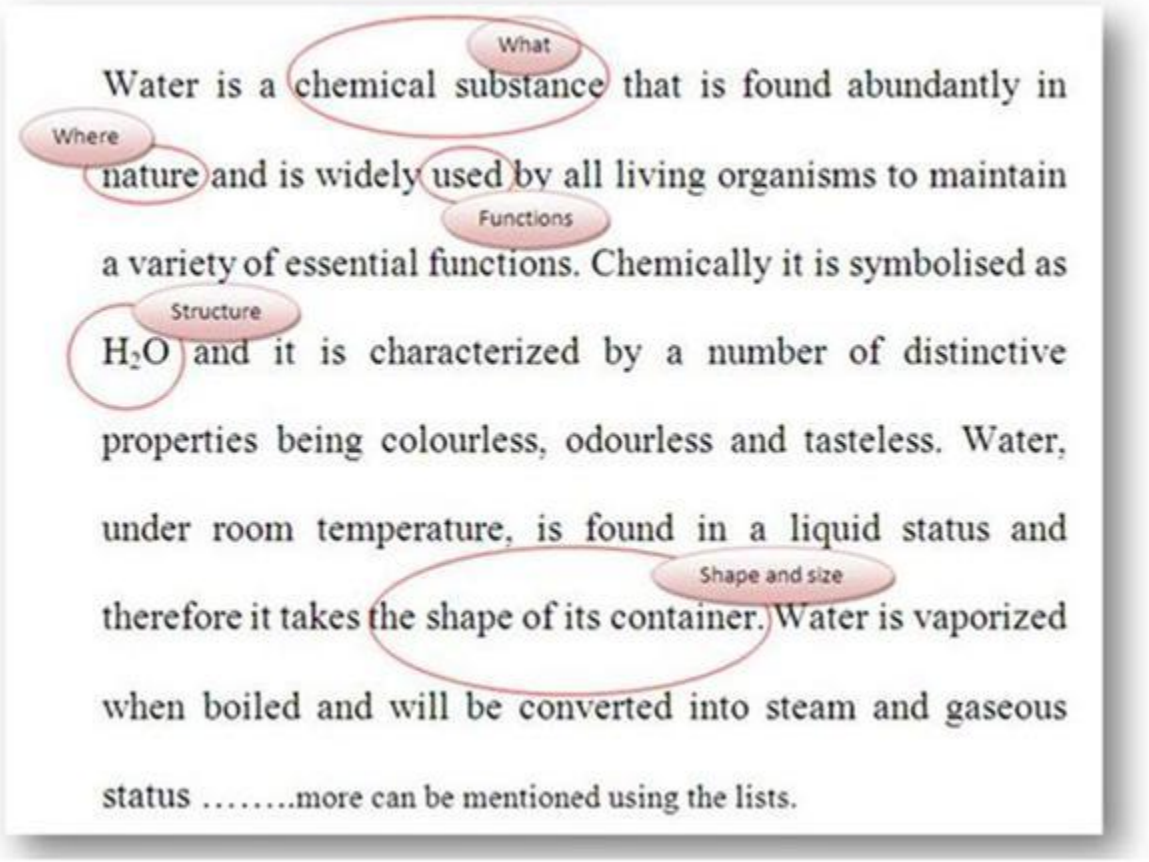
Structure, Surface, Status: Water is a liquid.

Shape: Water has no shape, and finally (**Specific features**)

Water is colourless, odourless and tasteless

Now let's put the phrases together nicely:

Water is a chemical substance that is found abundantly in nature and is widely used by all living organisms to maintain a variety of essential functions. Chemically it is symbolised as H_2O and it is characterized by a number of distinctive properties being colourless, odourless and tasteless. Water, under room temperature, is found in a liquid status and therefore it takes the shape of its container. Water is vaporized when boiled and will be converted into steam and gaseous status ……..more can be mentioned using the lists.



Students could apply the same approach to cellular definition and description and again they are to use items from the lists as appropriate.

For instance:

Organelles are microscopic structures found inside living cells of various shapes, sizes and structures designed to perform specific functions to maintain optimal living requirements of the cell. Examples of organelles are mitochondria, lysosomes, ribosomes, Golgi apparatus, etc.

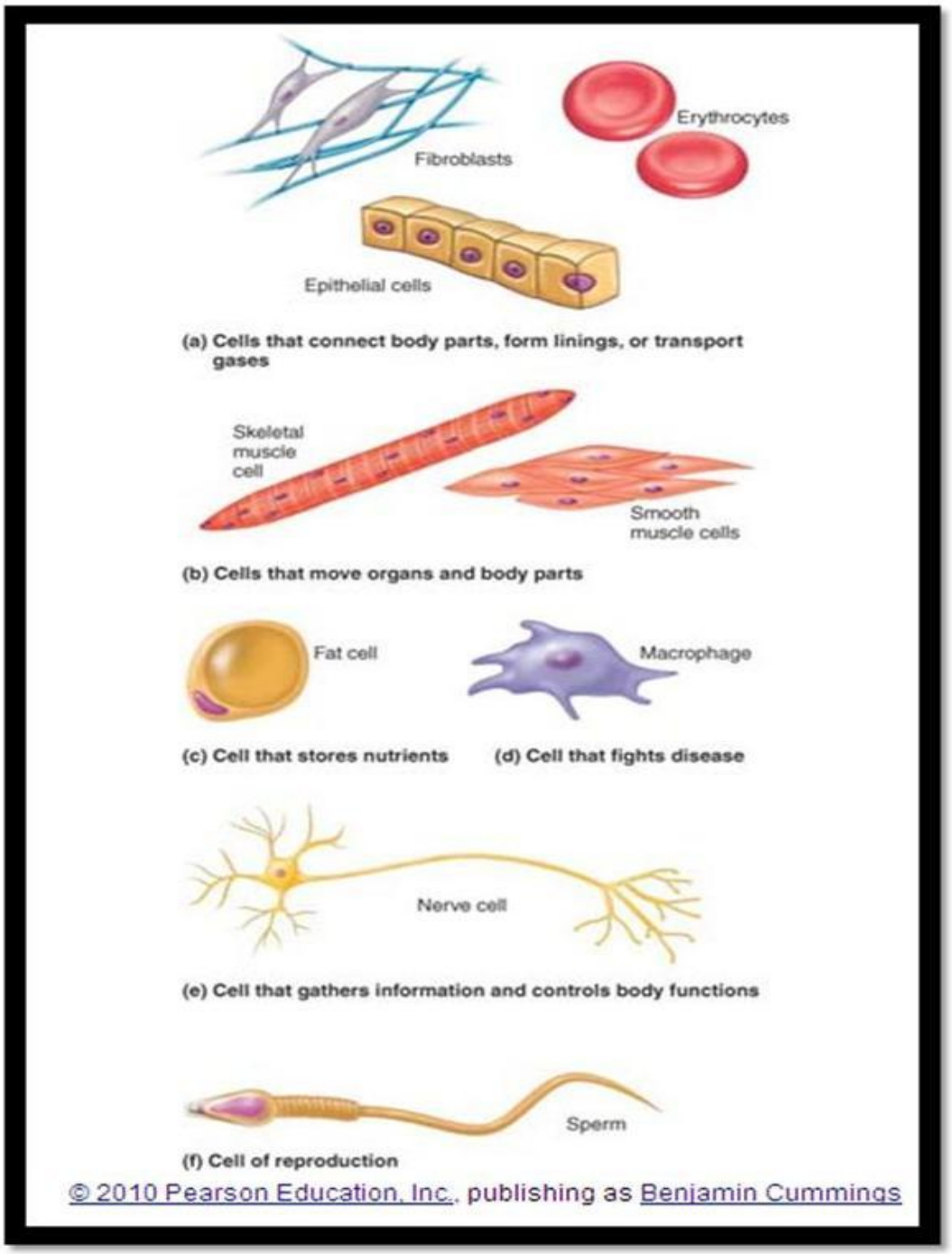
Lysosomes are minute structures found inside the cytoplasm of living cells designed for the purposes of cleaning and digestion.

Typical Living Cells

A cell is simply defined as a basic or smallest structural and functional living unit in the body. Cells are mainly made of carbon, hydrogen, oxygen, nitrogen and several other minerals. All living cells are surrounded by a thin membrane that functions as a fence or wall (as in a house) that protects the cell and has doors and windows that control which substances should enter and which should leave. The cell membrane selects what substances should enter or leave according to certain criteria. This feature is critical and known as semi-permeability. Inside the cell, like a nuclear family, there is a number of cellular structures that have specific important functions. These structures are known as organelles. All living cells contain the following organelles:

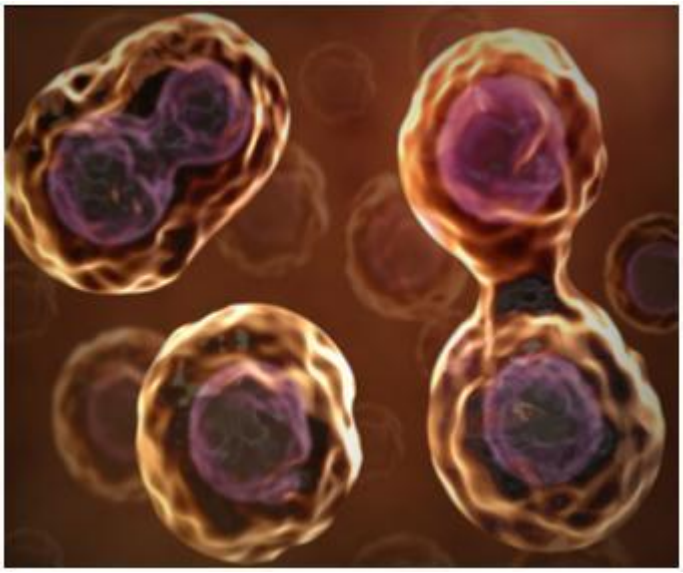
- Nucleus
- Nucleolus
- Mitochondria
- Golgi Apparatus
- Lysosomes
- Ribosomes
- Endoplasmic Reticulum
- Microfilaments
- Microtubules

Cells can have different shapes and sizes according to certain factors including their functions and the site they are found in. Cells are attached to each other through the cell membrane and form tissues which in turn are designed to perform specific functions.



Marieb, E., & Hoehn, K. (2010). Overview of the cellular basis of life. *Human anatomy & physiology*. San Francisco, CA: Pearson Education, Inc.

Types of Cells



Cells divide for a number of reasons such as growth, repair, healing, replacement and reproduction. There are three types of cells in this regard.

1- Labile cells that continue to divide and multiply throughout life such as GIT cells.

2- Stable cells which only multiply under certain circumstances such as nerve and heart cells.

3- Permanent cells which do not have the ability to divide such as the brain.

From the above information, please indicate what type of cells are the following:

1. The lining cells of the respiratory tract
2. The covering layers of the skin
3. The cells lining the bladder
4. The spinal cord

5. The mucosa of the tongue

6. The muscles of the heart

7. The muscles of the hand

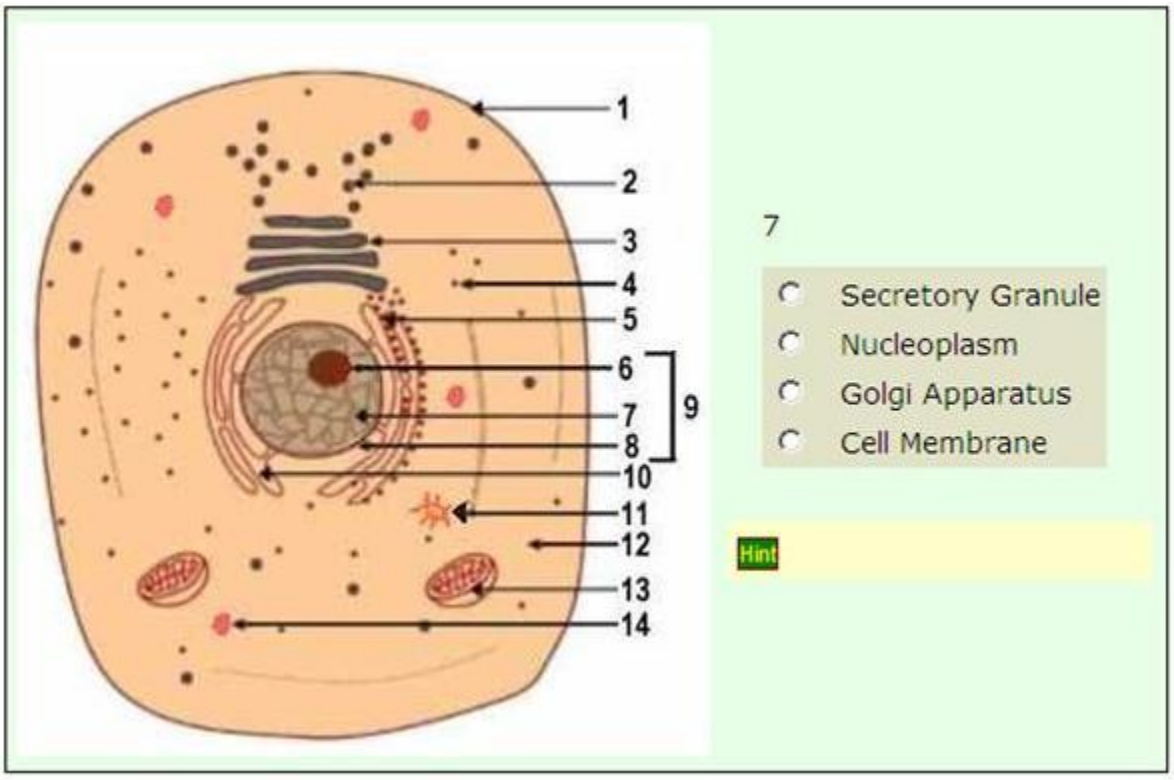
8. The scalp

Encyclopedia Britannica. (2010). Permanent, labile and stable cells. Retrieved August 20, 2010, from http://www.britannica.com/EBchecked/topic/452210/permanent-cell

The Smiley Face Approach

To be able to draw and label the various parts of the cell, please click on the following image

Test Your Knowledge



Please Click Here to Begin

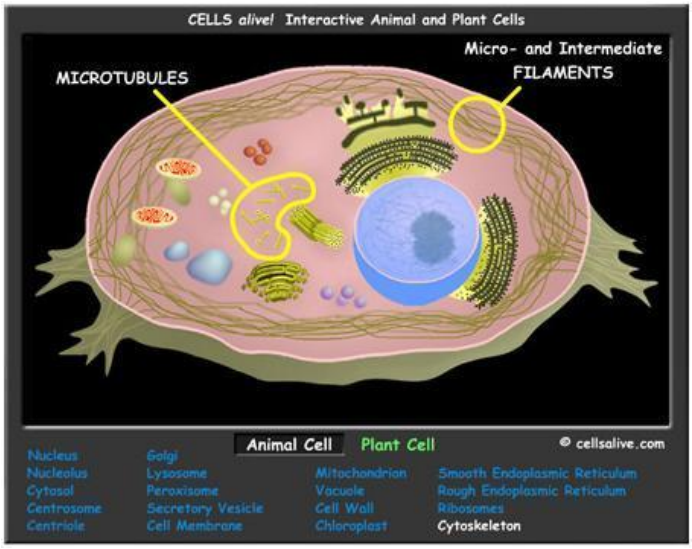
Cellular Quiz

Please Click Here to Begin

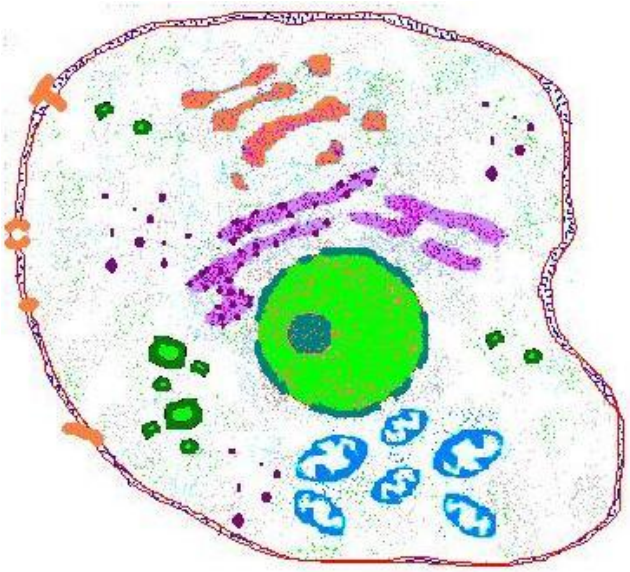
External Resources

Living Cells

Cellular Structure



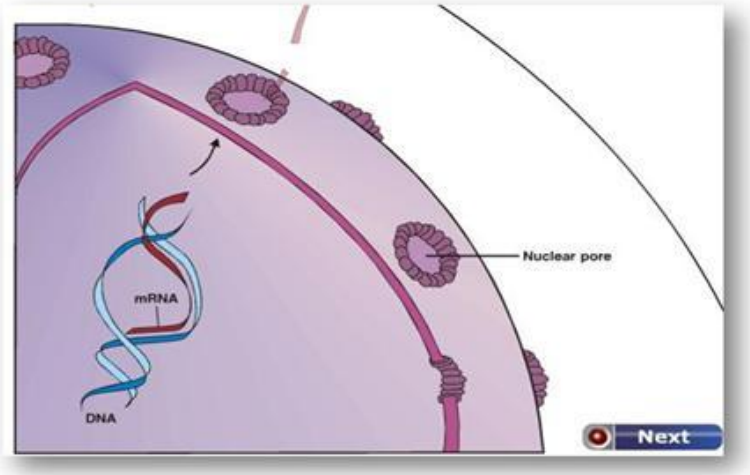
Welcome to CELLS *alive!*



Cell-ebration

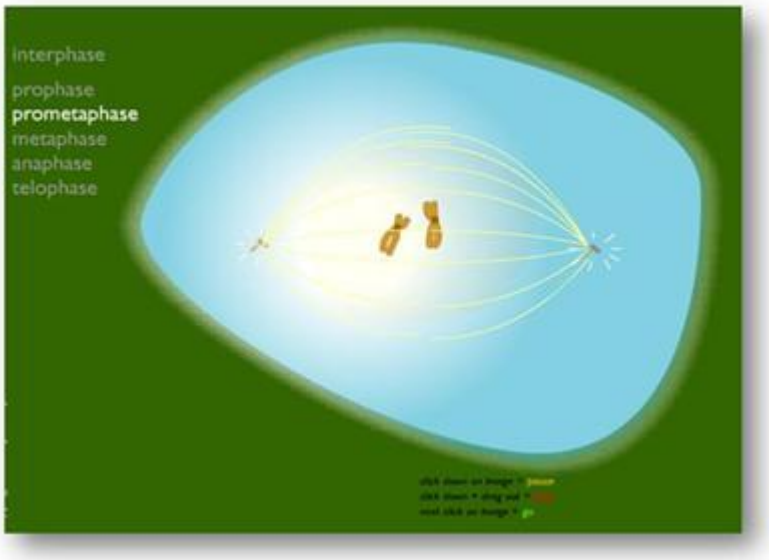
Other Topics

Protein Synthesis



Please click here to be directed to the animation website

Cell Division



Please click here to be directed the animation website

Purpose

The main purpose of this evaluation is to explore the extent of effectiveness of the e-learning component of the project including the smiley approach to the cellular basis of life.

Questions

1. How effective was the eLearning component of the project for learning in terms of usefulness, ease of access and engagement of students?
    - Sub-questions:
        - How beneficial did students find the lessons?
        - How useful did the students find the materials and external links?

- Which features did students believe were easy to navigate?
- What worked very well?
- How do the resources and activities influence the level of engagement by students?
- Why was the topic "Cellular Basis of Life" important to students' learning?
- Why is the timing of the online lessons important for students' learning?

2. What good practice can be identified and developed further to help others in the field of e-learning and related areas? (Winter, 2010).
3. What can be done better in terms of design, development and delivery? (Winter, 2010).

Methods

- Face to face interviews.
- Lecturers are asked to access the discussion board to assess participation and to assess the quality of the responses and feedback.
- Summative assessment: BN students who have visited the Blackboard course will be asked to draw and label the structure of a living cell.
- Online survey (image 3): An online survey consisting of seven questions: 15 participants

Audiences

1. The primary audiences are MIT students who are enrolled in:

- Nursing.
- Foundation for Nursing.

2. Staff and lecturers who are interested in health studies and e-learning.

Samples

1. Nursing students who visit the LSC.
2. Foundation for Nursing students who visit the LSC.
3. Lecturers from Foundation, Nursing and Health Studies, MIT.
4. Two learning advisors from the LSC.
5. Two librarians from MIT.

Results

The lessons have been revealed and displayed to almost all BN1 students (120) and around 60 students from Foundation for Nursing. Of those who have seen the course, only 47 students (26%) chose to enrol in the course. Although many displayed interest in the contents, only a few expressed written and verbal feedback. However 20 agreed to participate in individual interviews to find out how useful the lessons were. The following data and information were retrieved directly from the "Grade Centre" on Blackboard, eMIT: In total, 53 students and lecturers enrolled in the course. 15 participants attempted to take the survey. Only 11 participants completed the survey fully. Four participants partially completed the survey.

Face to face interviews

- Interviews with BN1 and Foundation students: 20

Some information and data are shown below that have been documented in a blog designed and utilized for this purpose. The following are some of the feedback and responses recorded in the blog:

Today, 16th Sept. 2010, I received two mature students from Nursing and we talked briefly about the special topic in terms of evaluation of effectiveness. They reported that the smiley approach was so effective that they could teach some other students how to remember the approach effectively.

On the 29th of Sept. another group of students from BN1 expressed that they heared of the web-site and wanted to know more about it. I advised them to enrol and navigate through the contents . One of them named Bernard said that he was already enroled and just could not comment and had some difficulties in answering the survey questions. I advised him to make an appointment and show me what he did not follow exactly.

On the 30th of Sept. a lecturer reported that she would be encouraging her students to visit the website and it looked very good apart from that I needed to colour the images included.

On the 2nd of Nov. 2010, I had a study group for chemistry and I took the opportunity and asked two of the students to do an interview with me to evaluate the online lessons. They reported that they still remember the approach clearly and have taught other students already. I asked them if they had done the online survey, they said they did not and did not know there was a survey. They explained that they were not enrolled yet. I asked them how they know about the lessons and they were not enrolled yet. They reported that when I took them a while ago, I retrieved the lessons online and that was it. They said they did not need to enrol. The lessons were easy that they truly believe they did not need to enrol to view the lessons again. I explained that the lessons were more than the cellular contents. They said that they were busy

with chemistry but just prior the major biology exam; they will try to visit the lessons and complete the survey.

On the 8th of Nov. 2010, I met with Ruth, Florence and Nalini from Foundation of Nursing at the LSC and asked them to enrol in my online courses. Ruth seemed to know all about the approach and she mentioned that it was easy. Florence said she could remember many aspects of the approach but she had not enrolled as she thought that did not need to. Ruth and Nalini wanted to know how to enrol. I asked Ruth to sign in eMIT using her account. Then I showed her how to enrol step by step. It seems that many students just don't how to enrol in a course been made available for them.

Today, 10th of Nov. 2010, I also thought about asking someone who has a limited science background to access the lessons and provide me with some feedback. I decided to ask Malia. Malia is the administrator at the LSC. She informed me that she has a very limited science background and she rather thought that she hated biology. I asked her if she was interested in accessing the online lessons and view some of the lessons for only 30 minutes. She claimed that she was happy to do so. After she was given access, I asked her to approach the "smiley face approach" first. Twenty minutes later she called me and said it was fun. I asked her to draw and label a living cell. She could draw and label 90% of the various components of the living cell easily and nicely. She thought that it was very easy to follow the steps and more importantly it was fun.

Today, 15th of November, 2010, I ran a workshop with a group of Foundation for Nursing students. We did living cells and protein syntheses. I took the opportunity and displayed my lessons on the big screen. Amy and Debbie believed that the lessons were very easy and they learnt a lot. I asked them to enrol and provide me with feedback.

- Interview with lecturers : 2

Two lecturers stated that they liked the online lessons and were going to encourage the students to regularly visit them. However, one lecturer believed that I should have used more colorful items and more interactive tools.

One lecturer in particular thought it should be maintained continually to further support their students.

- Interviews with educational expert: 2

An expert from the Technology Information Centre thought that the lessons are simple, assist in memory and are fun (table 1).

Another expert thought that the lessons were not that effective and the approach was an ordinary one and was to an extent irrelevant to the realistic approach to the cellular contents.

- Interviews with a person with no science background: 1

“Today, 10th of Nov. 2010, I also thought about asking someone who has a limited science background to access the lessons and provide me with some feedback. I decided to ask Malia. Malia is the administrator at the LSC. She informed me that she has a very limited science background and she rather thought that she hated biology. I asked her if she was interested in accessing the online lessons and view some of the lessons for only 30 minutes. She claimed that she was happy to do so. After she was given access, I asked her to approach the "smiley face approach" first. Twenty minutes later she called me and said it was fun. I asked her to draw and label a living cell. She could draw and label 90% of the various components of the living cell easily and nicely. She thought that it was very easy to follow the steps and more importantly it was fun.” (Image 2).

Online Survey (image 3)

Three or more online surveys were designed and questions were reworded completely a couple of times as instructed by an expert (Bronwyn Hegarty). Survey questions were made easier and more straightforward. Many students expressed that they were aware of the lessons but did not have enough time to take the survey. Many others stated that they did not know how to complete the survey and needed help to do so.

Based on the data collected, the vast majority of the students understood the topic clearly and thought that the lessons were effective and clear.

A lecturer was asked to remind the students of the lessons in the class. She was also requested to ask students for feedback. She reported that the vast majority stated that the smiley face approach was very clear, easy and fun to do. Feedback revealed that many students did not enrol in the course and never knew how to enrol. Participants responded to the survey questions in different ways, but by in large positively.

An expert thought that more survey questions were needed. The expert believed that seven questions were not enough to evaluate an online lesson on eMIT.

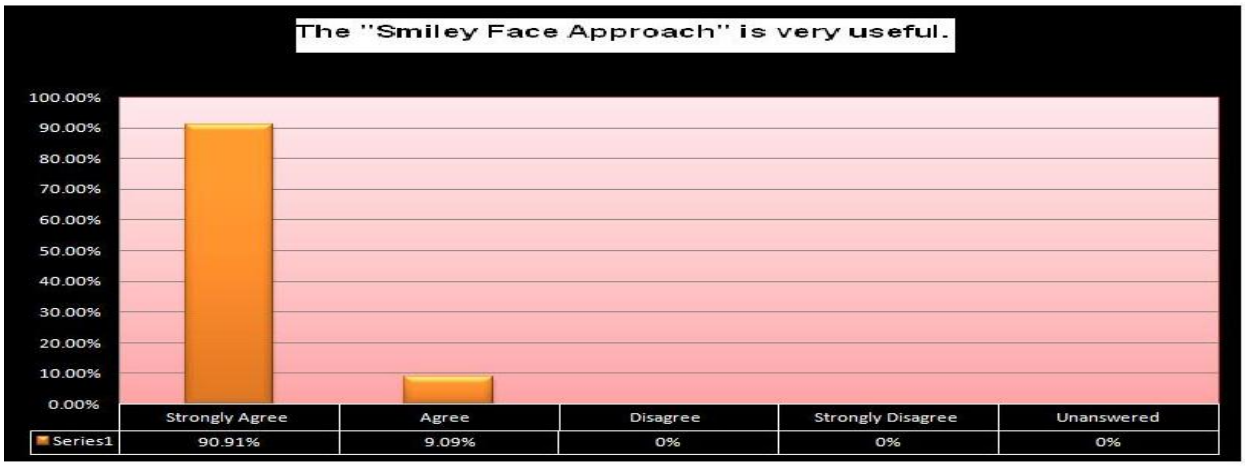
Many students provided verbal feedback. Some posted comments in the discussion board provided for asking questions. Many others did not want to participate at all. However, a lecturer from the Nursing Department was asked to collect verbal feedback and informed the learning advisors that many believed the approach was highly effective.

Question six and seven in the survey questions required the participants to include written comments and responses in terms of what they liked and what they found unhelpful (image 6 & 7). Apparently the majority stated that the lessons were very effective.

Below are the survey questions and corresponding responses:

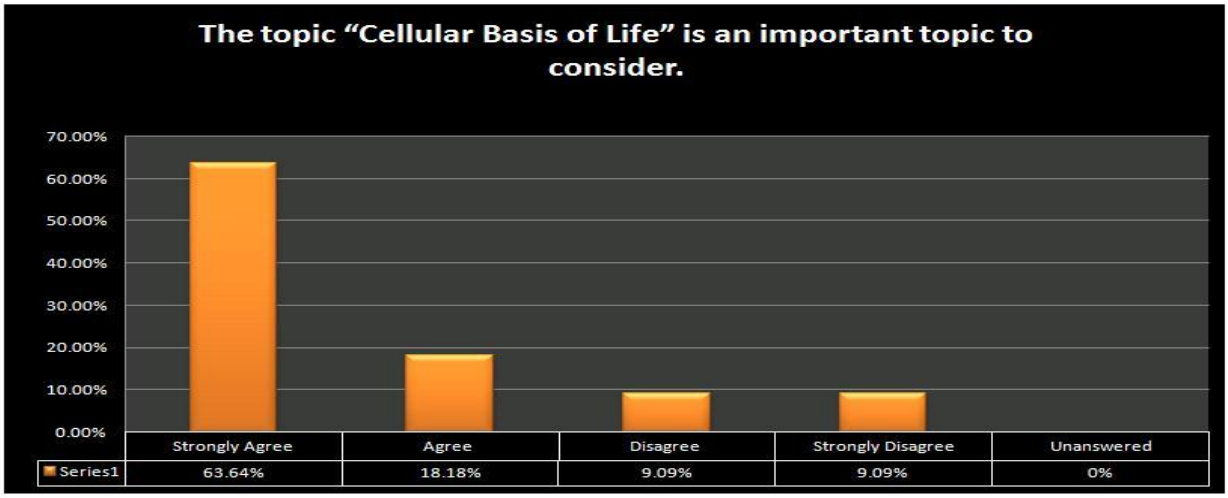
The "Smiley Face Approach" is very useful.

Strongly Agree	90.91%
Agree	9.09%
Disagree	0%
Strongly Disagree	0%
Unanswered	0%



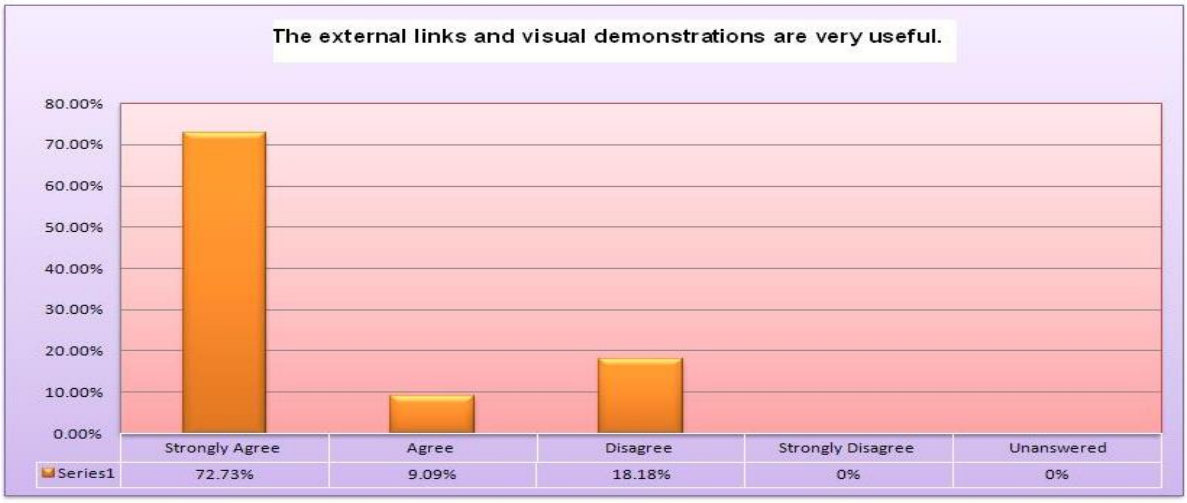
The topic "Cellular Basis of Life" is an important topic to consider.

Strongly Agree	**63.64%**
Agree	**18.18%**
Disagree	**9.09%**
Strongly Disagree	**9.09%**
Unanswered	**0%**



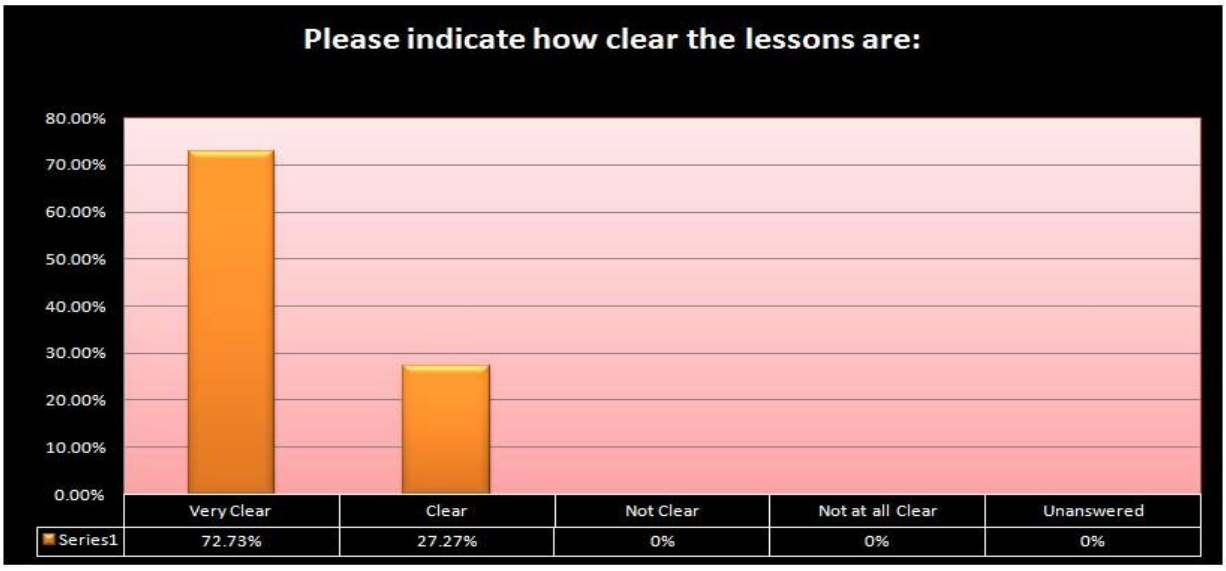
The external links and visual demonstrations are very useful.

Strongly Agree	72.73%
Agree	9.09%
Disagree	18.18%
Strongly Disagree	0%
Unanswered	0%



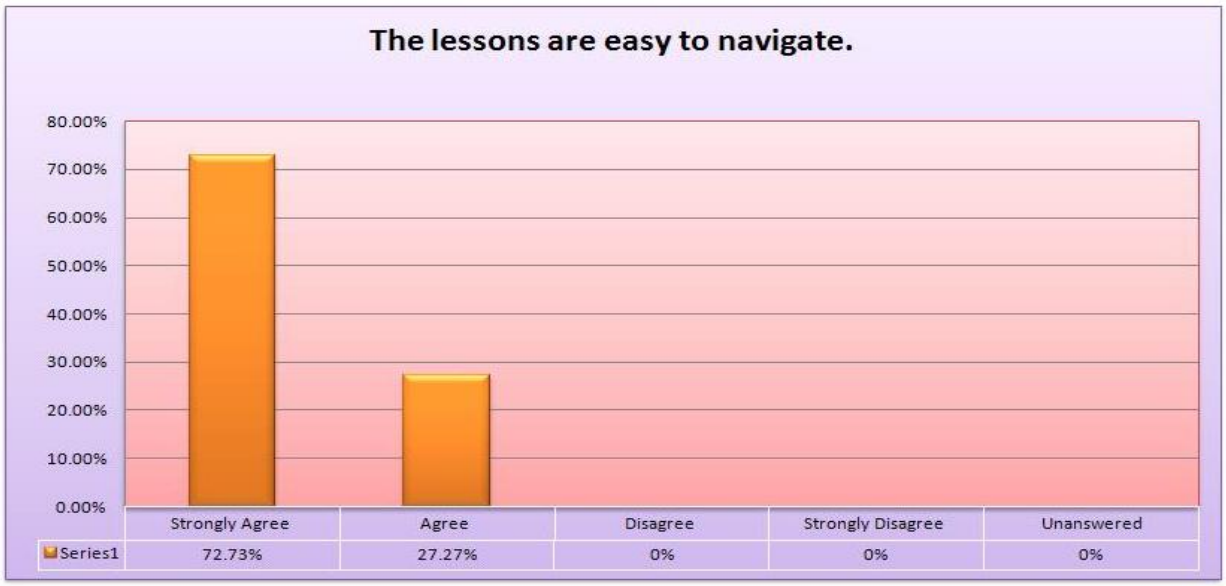
Please indicate how clear the lessons are:

Very Clear	72.73%
Clear	27.27%
Not Clear	0%
Not at all Clear	0%
Unanswered	0%



The lessons are easy to navigate.

Strongly Agree	72.73%
Agree	27.27%
Disagree	0%
Strongly Disagree	0%
Unanswered	0%



More feedback provided can be viewed on pages 37 and 36 (images 6 & 7).

Discussion Board

Some lecturers were asked to access the discussion board to assess participation and to assess the quality of the responses and feedback. A lecturer said that the approach used was very useful (image 4). A librarian who is specialized in bioscience agreed with her and thought that the smiley face was an easy approach.

An experienced learning advisor believed that he likes how the face was used to illustrate various parts of the living cell. He also thought that a face was something that people could draw and relate to in everyday life (image 5).

Discussion

Students and learners can develop various learning styles and study skills. There are four types of learning styles being visual, aural, read/ write and kinesthetic.

It is also well established that there are seven types of multiple intelligence being visual/spatial intelligence, verbal/linguistic intelligence, logical/mathematical intelligence, bodily/kinesthetic intelligence, interpersonal intelligence and intrapersonal intelligence (Howard, Gardner as cited in ldpride.net, 2010).

A multiplicity of learning methods and styles to approach academic issues can hugely contribute to learning. It can also greatly enhance memory and memorisation (Mantle, 2001). The smiley face approach can actually induce a number of mixed learning styles. Apparently it includes visual, read/write and kinesthetic interactivities. Learners and students can learn better when certain aspects of the lesson is enjoyable. Learners instinctively can do better when lessons are interactive and engaging (Harris, 2010).

The step-by-step activity included in the smiley face approach involves multiple learning activities that appeal to more than one learning style.

Many Nursing students at the beginning of semester one have hopes to continue their study successfully and achieve their goals efficiently. Many of them are mature students and have left school a long time ago. Adding to that many lack science background and as adult learners they have a number of social issues and a range of obligations and commitments (Robert, 2010). Introducing simple methods and approaches to enhance their learning can actually enhance their academic confidence and can largely contribute to their success. Furthermore, multiplicity of resources and external links can assist students to have a better understanding of topics. The smiley face approach has helped many students understand the

cellular basis of life easily. From the survey conducted, more than 90% strongly agreed that the approach was very useful, with the remainder just agreeing that it was very useful. However, only 63% strongly agreed that the cellular basis of life is an important topic to consider.

Easy navigability and clearly formatted topics, images and external links are important features to consider when designing websites and planning online lessons (Mahoney, 2010). From the responses to the survey conducted, 72% of the participants strongly agreed that the lessons were easy to navigate with the remaining 28% agreeing that they were easy to navigate. 72% also strongly agreed that the external links and visual demonstrations were very useful. However, 18% disagreed that they were useful.

Clarity and easy understandability of topics are also imperative considerations in the process of designing and planning online lessons. Individuals can learn better when familiar stimuli are received and perhaps familiar concepts are easier to process (eLearning Coach, 2010). A smiley face is a very familiar finding and anyone can draw and remember it. An advisor from the Learning Support Centre thought that a face is something that people can draw and relate to in everyday life and this will help them to recall the various parts of the cell (image 5).

Reeves and Hedberg (2003) state that for a mixed method approach to be effective one should consider both qualitative and quantitative methods of gathering information and data. In this way a triangulation of findings is formed and can actually construct a useful revision of an elearning instructional design. Tools that can be used in this regard are surveys and interviews using structured and/or unstructured questions (Gratton & Jones, 2004). Triangulation is then applied when a variety of methods are used to collect responses and feedback to evaluate how effective the on-line learning component is. Apart from the survey and individual interviews,

a discussion forum was also utilised to collect further data to evaluate the effectiveness of the online components. Reeves and Hedberg (2003) indicate that there are six facets of instructional product evaluation including needs assessment, formative evaluation and effectiveness evaluation. The project (Smiley Face) focuses upon one facet only, "effectiveness evaluation". Some of the students participated in the interviews were asked to draw and label the various parts of the living cell and they were able to do so effectively (Image 2). Formative evaluation according to Flagg (as cited in Reeves and Hedberg, 2003) is the methodological collection of data to improve a service or product. One student in particular did not achieve well and later she stated that a list of vocabulary should have been provided at the beginning of the lesson. Perhaps she is right; a list of vocabulary is a good idea. One participant stated that the external links and videos were confusing and suggested to include clear instructions (image 7).

Conclusion

The cellular basis of life is a relatively important topic to focus on and consider. Many mature Foundation for Nursing and BN1 students find these topics perplexing and ambiguous. These students do need memorable approaches to expand their knowledge and enhance their learning. In this regard, the online lessons utilizing Blackboard on eMIT were designed. An effectiveness evaluation was needed to evaluate how useful the lessons are. Samples of students, lecturers and experts were chosen to take part in the evaluation process. An online survey along with a discussion board and face to face interviews were conducted. Results revealed that the vast majority stated that the lessons were very useful in particular an approach named “the smiley face” which was perceived to be highly successful. However, the

lessons and the approach can be further developed to enhance better understanding of the cellular basis of life.

Recommendations

The online lessons designed explain a relatively complex topic in a simple way. A few recommendations were suggested by experts and educators. However, the lessons can be further developed by modifying the approach to be more relevant to the cellular contents in terms of shape and structure. For instance, Golgi apparatus is a pancake shaped structure rather than an oval shaped object. Students must approach the cellular contents and structure more practically and realistically. A list of vocabulary at the beginning of the lessons is also recommended and functional terms should be spelt correctly.

Furthermore, other effective tools for collaboration, interactions and discussions are highly recommended such as additional relevant exercises and quizzes (for example, a quiz where students get an opportunity to test their knowledge). Boxes and fields for participants' responses should be provided particularly under the section of "Types of Cells". More relevant topics and external links are also recommended. In terms of format and layout, more colorful images should be included in the illustrative section of the smiley face approach. Further advice from educators, lecturers and experts in the fields of e-learning and bioscience at MIT and other educational establishments are also suggested. Collaboration with other departments such as the Technology Learning Centre and library for advice and suggestions is highly essential.

References

eLearning Coach. (2010). *How visual clarity affects learnin.* Retrieved December 10, 2010, from http://theelearningcoach.com/learning/visual-clarity-and-learning/

Gratton, C. & Jones, I. (2004). *Research methods for sport studi*es. New York: Routledge.

Harris, R. (2010). *Some ideas for motivating students*. Retrieved December 9, 2010, from http://www.virtualsalt.com/motivate.htm

Herrington, J., Reeves, T.C., & Oliver, R. (2006). Authentic tasks online: A synergy among learner, task and technology. *Distance Education, 37*(2), 2233-247.

Mahoney, J. (2010). *The importance of an easy navigation web design*. Retrieved December 10, 2010, from http://ezinearticles.com/?The-Importance-of-an-Easy-Navigation-Web-Design&id=3213229

Mantle, S. (2001). *The seven learning styles*. Retrieved December 9, 2010, from http://www.lessontutor.com/sm1.html

Marieb, E., & Hoehn, K. (2010). Overview of the cellular basis of life. *Human anatomy & physiology*. San Francisco, CA: Pearson Education, Inc.

Reeves, T. C., & Hedberg, J. G. (2003). *Evaluation: Interactive learning system*. NJ: USA. Englewood Cliffs.

Robert, S. *Review of Malcolm Knowles Theory of Adult learning*. Retrieved December 9, 2010, from http://www.articlesnatch.com/Article/Review-Of-Malcolm-Knowles-Theory-Of-Adult-Learning/997312

Winter, M. (2010). *Second life education in New Zealand: Evaluation research final report*. Retrieved September 23, 2010, from http://wikieducator.org/images/1/13/Slenz-final-report-_milestone-2_-080310cca.pdf

Appendices

Image 1

The Blackboard Lessons

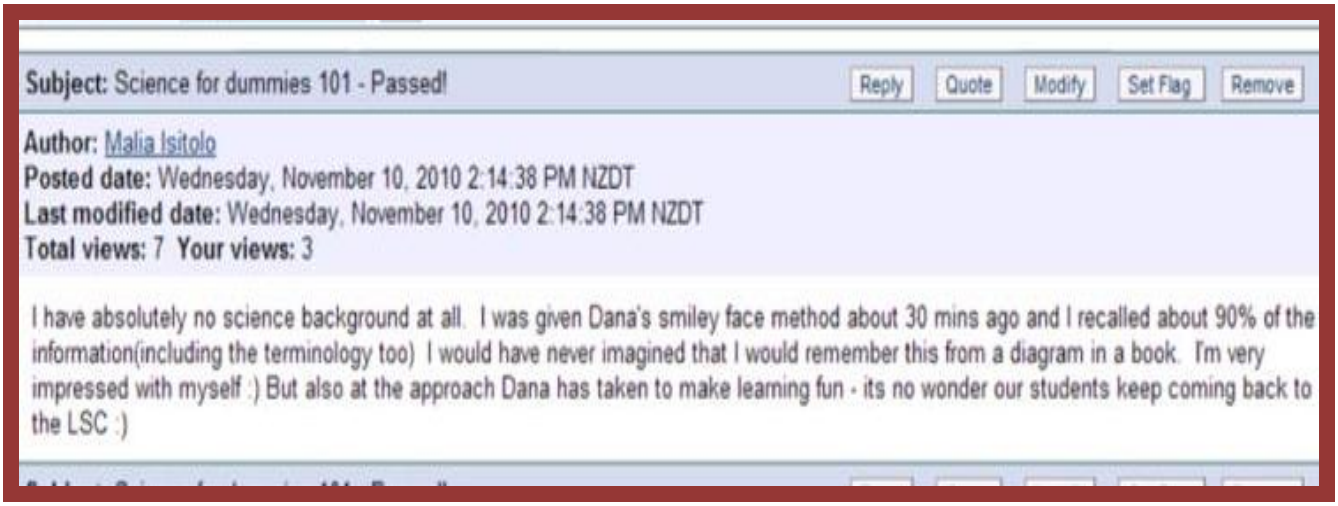
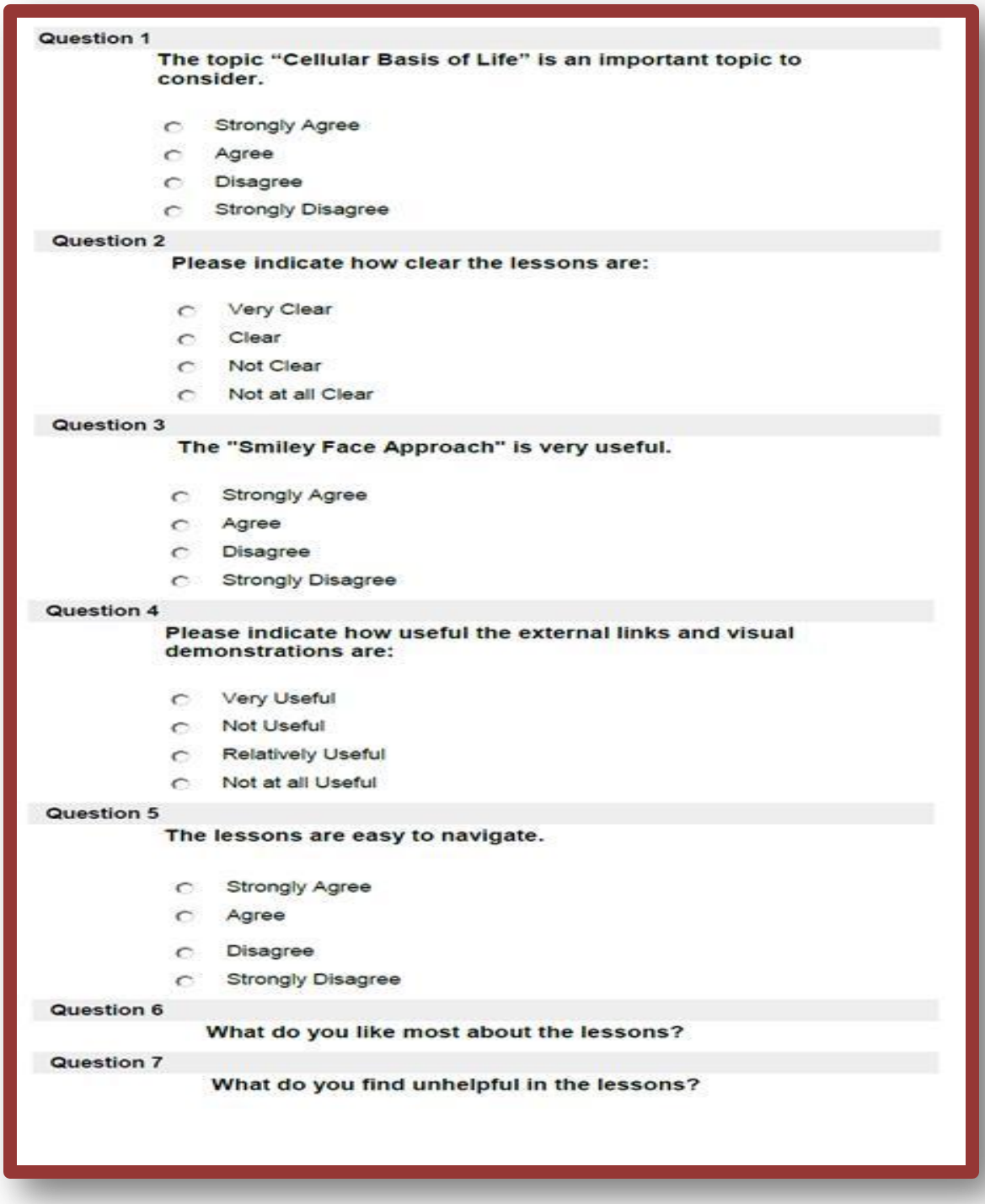


Image 2



Question 1

The topic "Cellular Basis of Life" is an important topic to consider.

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

Question 2

Please indicate how clear the lessons are:

- Very Clear
- Clear
- Not Clear
- Not at all Clear

Question 3

The "Smiley Face Approach" is very useful.

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

Question 4

Please indicate how useful the external links and visual demonstrations are:

- Very Useful
- Not Useful
- Relatively Useful
- Not at all Useful

Question 5

The lessons are easy to navigate.

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

Question 6

What do you like most about the lessons?

Question 7

What do you find unhelpful in the lessons?

Image 3

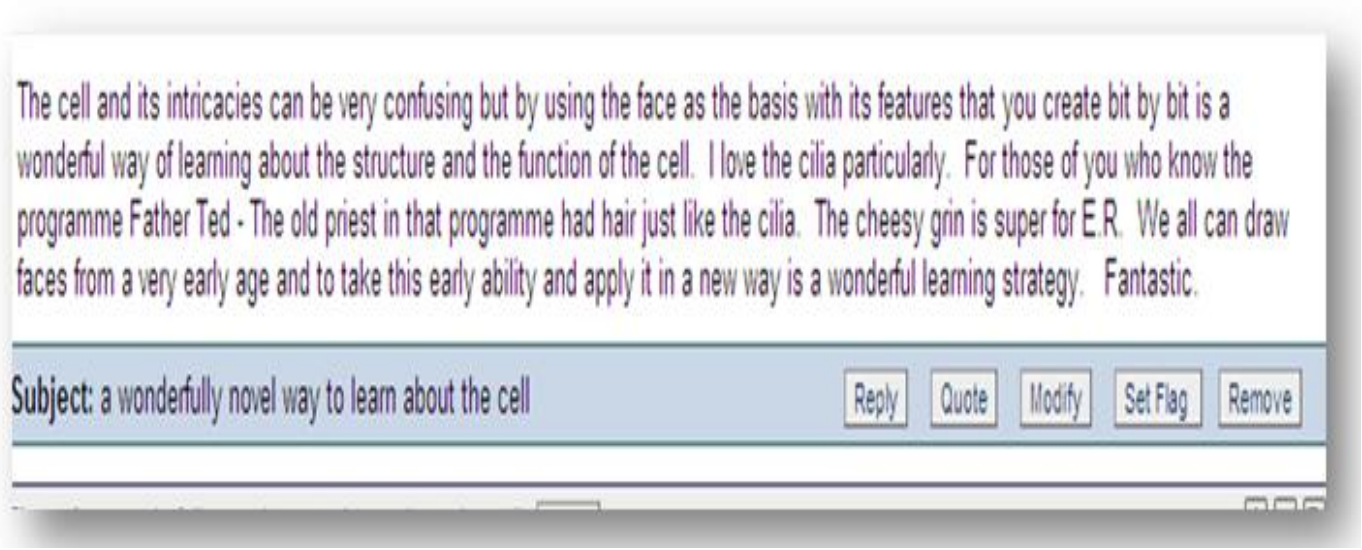


Image 4

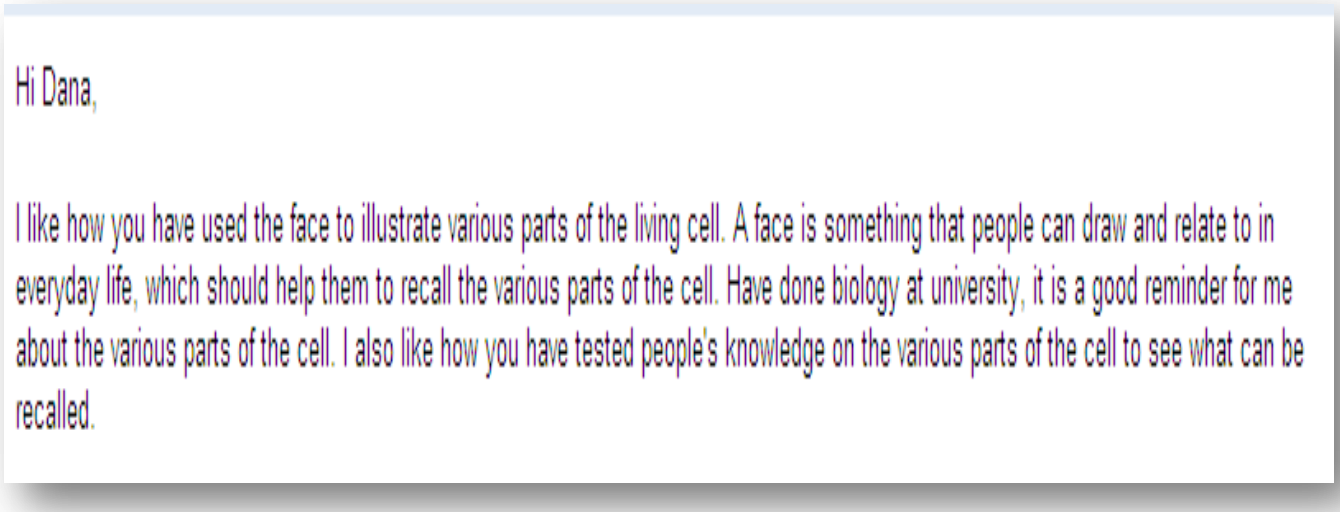


Image 5

What do you like most about the lessons?

Unanswered Responses
0

Given Answers
I quite like them all, I feel lessons help to strengthen by basic knowledge of this topic. I also know of a number of other students who would like to access these lessons.
Easily accessible and easy, simple to understand. Smiley faces and colours make it fun to learn.
Step by step approach and the face especially. Good, clear explanations with not too many words and linking to what I already know, e.g the face!
The way Dana explains. It is very clear and easy to understand and some of the words are so hard to prounce. Dana makes everything very easy
.
He explane difficult word in to easy way so I understand his lesson and use his notes for my exams as well as in my test
I feel the learning style that Darna takes is one that i can easily relate to. I have been able to take my learning in class and have this cemented by Darna. I like how Darna simplifies topics and teachers you a way to remember and explain what you are learning. Darna is very knowledgeable and has a passion the sciences I also appreciate his passion for the students successes. I dont know where i would have been without Darna's support and knowledge?
It is a fun way to learn and therefore is very motivating.

Image 6

What do you find unhelpful in the lessons?

Unanswered Responses
0

Given Answers
No problems
The links out to videos and quizzes on the internet were a littly confusing - how to get back and what to do to move on and get feedback on the quiz - would be nice to have instructions or get rid of all the ads etc on the screen.
..
I found no fault with any of the lessons.
Rather than "not like" I have the following comments and suggestions to enhance a site that is already very good :) 1. Under announcements - some students may not know what a WIMBA session is 2. Staff info folder above picture (why is this there?) 3. Course lesson regarding water. Everyone uses water massively each day - strange way of putting things. Question not quite clear. Handling of transition towards academic definition of water could be improved. Letter s on functions is red. The items you came up with to define water are different than what you had on your list. Shift site to the right so it is consistent in layout to the others. 4. Overview of cells - functional mispelt. Use colour to show feature added throughout pics 5. Types of cells - provide boxes for people to provide their responses in 6. Test your knowledge - try another set stuck in advertising 7. Assessment - spelling of smiley face approach needs fixing
Times are limiting.
I have not found anything else unhelpful from my contact with the learning centre.
i didnt see any disadvantages
not at all
There is nothing about these lessons that is unhelpful.
Nothing

Image 7

Grad Cert in Applied eLearning – 10 credit special – Dana Karem		
Learning Outcomes	**Initial Feedback**	**Final Feedback:**
LO 1. Identify and negotiate an Applied eLearning topic/project for investigation	Looks like a good topic to choose and useful to MIT students.	The topic is certainly of use to the nursing students. It is an inventive approach to a difficult concept. You have explained your approach and rationale well on the blog.
LO 2 Design the process/plan by which their goals will be achieved**.**	You have made a start on this – but a bit more would help too. Maybe answer the questions here in a bit more detail?	You have prepared a lot of material which will assist them to get their heads around the topic. The material is chunked well and has interactive elements. The concept of the smiley face is a simple one and assists in memory, and it's fun! ☺ If you can get 90% of it in your head in 30 minutes, that is a credit to how well suited it is to the students.
LO 3. Implement the process/plan while modifying as appropriate**.**	This is the next part to work out and get sorted.	The plan went ahead, and the resource was built well ahead of time allowed.

Table 1

Oriel's Feedback