Enriching 21st century higher education students' job creation skill :
UTM academic staff perceptions toward MIT BLOSSOMS

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What are some skills required for jobs by future employers?

Problem Statement

ICTLHE in conjunction with RCEE & RHEd which was held in Malaysia in 2012.

Resolutions based on discussions among key industry players and academicians include:

- Graduates must be able to create new jobs and create companies with new innovations.

- Graduates find it hard to communicate, unable to interact with colleagues and people, fail to display team spirit and face difficulties in adapting to the job market.

- Students are unable to relate and apply what they learn in classroom into real world application. Initiatives should therefore reduce the gap between classroom and real working environment.

Problem Statement

Based on a survey, Malaysian Soft Skills Scale (My3S), generic skills or graduate student attributes that require serious attention in Malaysian universities include :

Communication skill - English as a second language

Team working skill - interaction and networking

Critical & problem solving skills - innovative

Entrepreneurial skill - job creation

Problem Statement

- What are some characteristics of 21st century higher education students?

- In the last few decades there has been a gradual shift of understanding about how learning should be facilitated in higher education.

- Emphasis on Student Centred Learning (SCL) rather than Teacher Centered Learning.

- By year 2015, all Malaysian academic staff are required to use in their teaching and learning activities at least 1 SCL method such as case studies and problem-based learning (National Higher Education Strategic Plan).

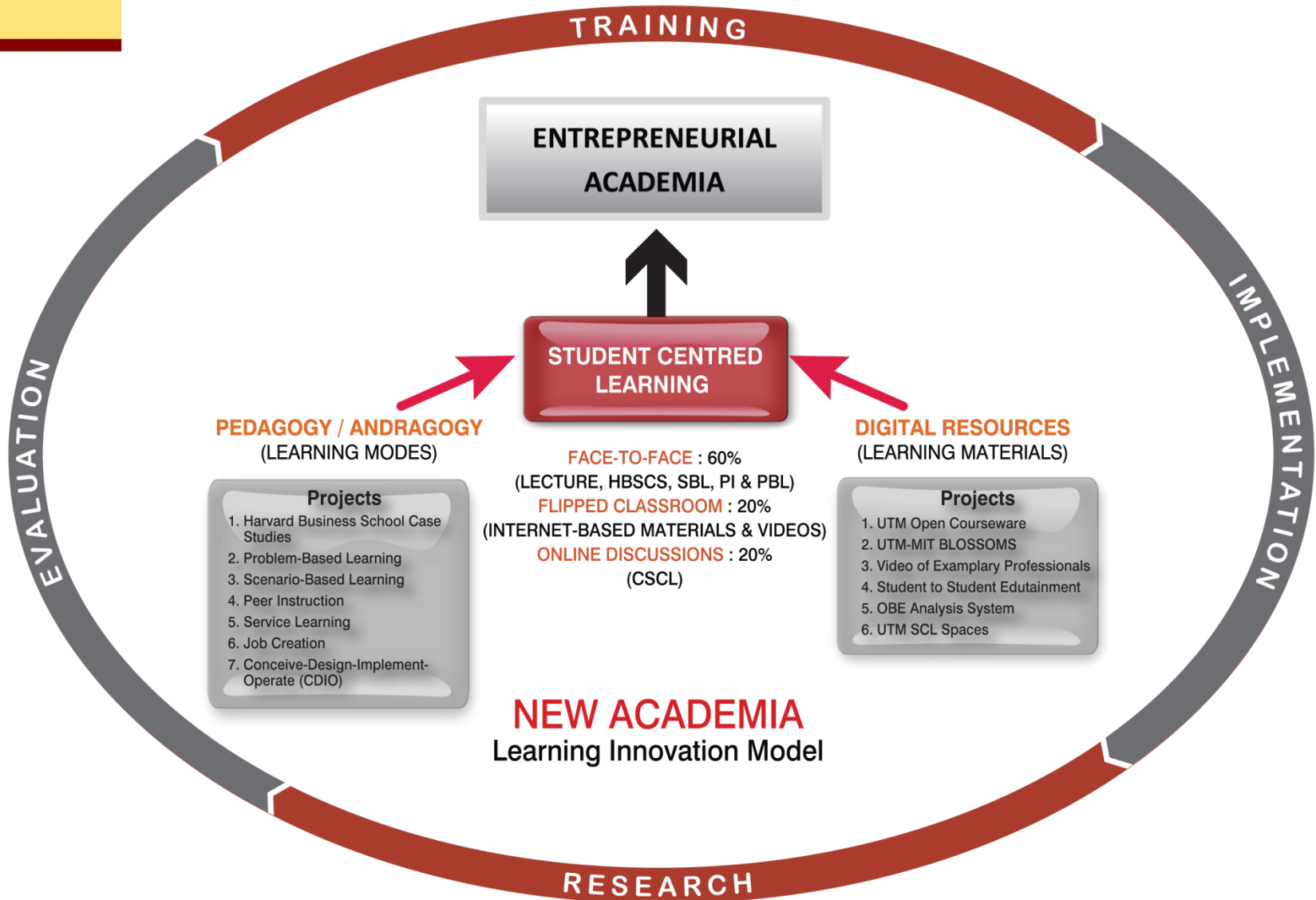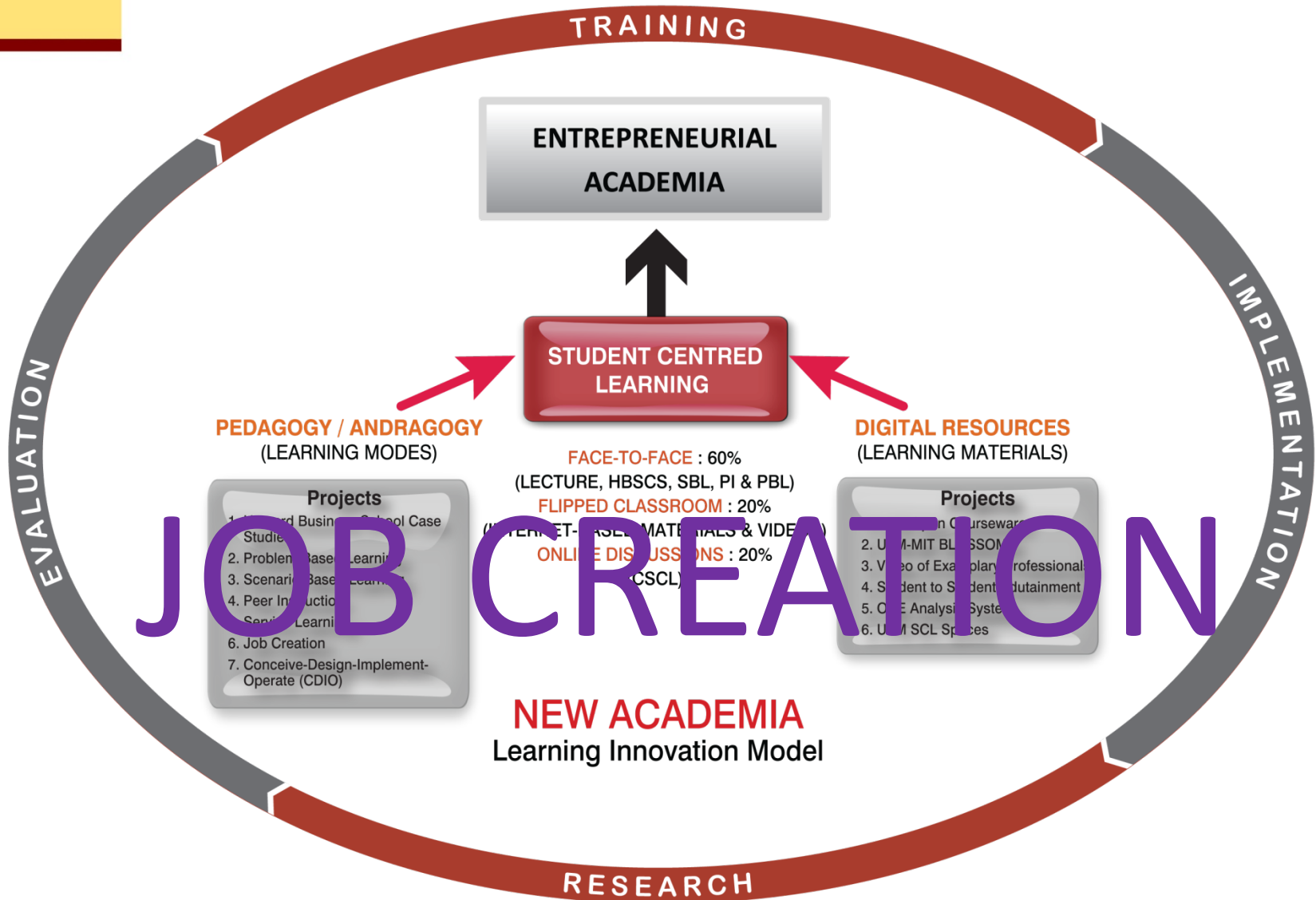# A Solution
UTM NEW ACADEMIA
LEARNING INNOVATION MODEL
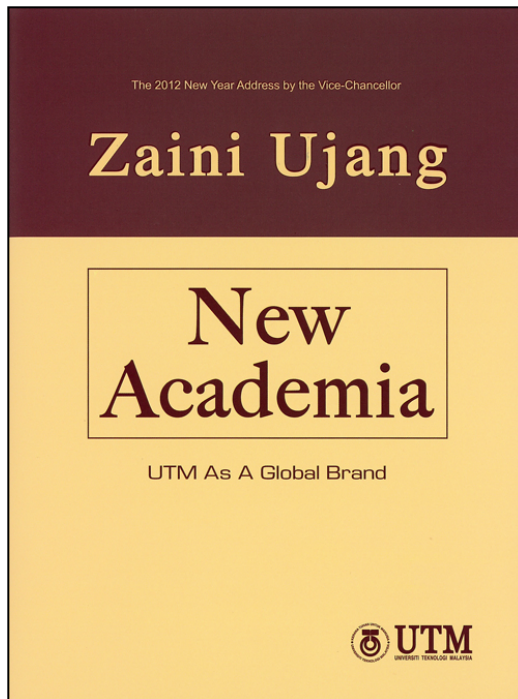
Developed in 2012.

Brain child of Zaini Ujang (Secretary General II of the Malaysian MOE and Past VC of UTM).

Task Force was formed under Rose Alinda Alias who is UTM DVC (Academic & Internationalization) and Champion.

To materialize UTM New Academia Learning Innovation initiative, Baharuddin Aris (UTM Director for Teaching and Learning) as the Task Force Leader.

The 2012 New Year Address by the Vice-Chancellor

Zaini Ujang

New Academia

UTM As A Global Brand

TRAINING

IMPLEMENTATION

RESEARCH

EVALUATION

ENTREPRENEURIAL ACADEMIA

STUDENT CENTRED LEARNING

PEDAGOGY / ANDRAGOGY
(LEARNING MODES)

FACE-TO-FACE : 60%
(LECTURE, HBSCS, SBL, PI & PBL)
FLIPPED CLASSROOM : 20%
(INTERNET-BASED MATERIALS & VIDEOS)
ONLINE DISCUSSIONS : 20%
(CSCL)

DIGITAL RESOURCES
(LEARNING MATERIALS)

Projects
1. Harvard Business School Case Studies
2. Problem-Based Learning
3. Scenario-Based Learning
4. Peer Instruction
5. Service Learning
6. Job Creation
7. Conceive-Design-Implement-Operate (CDIO)

Projects
1. UTM Open Courseware
2. UTM-MIT BLOSSOMS
3. Video of Examplary Professionals
4. Student to Student Edutainment
5. OBE Analysis System
6. UTM SCL Spaces

NEW ACADEMIA
Learning Innovation Model

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NEW ACADEMIA
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How 21st century higher education Student Learn

Team-Oriented: . Generation Y is loyal, committed and wants to be included and involved. They value teamwork and seek the input and affirmation of others

Attention-Craving: Generation Y craves attention in the forms of feedback and guidance. Generation Y may benefit greatly from mentors who can help guide and develop them.

How 21st century higher education Student Learn

5 Minds for the Future

Howard Gardner (http://howardgardner.com/)

Harvard Graduate School of Education
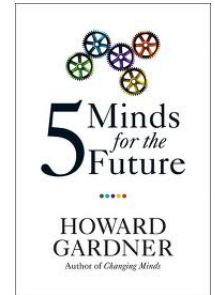
The Disciplined Mind – applying diligently, improving steadily and continuing beyond formal education.

The Synthesizing Mind – selecting crucial information from the copious of information available and arraying that information so as to make sense to self and others.

The Creating Mind – going beyond existing knowledge and syntheses to pose new questions and offer new solutions.

The Respectful Mind – responding sympathetically to differences among individuals and groups, and extending beyond mere tolerance.

The Ethical Mind – striving toward good work and good citizenship.

MIT-BLOSSOMS video (embed with critical and thinking skills)

- Information and Communication Technology (ICT) can be used to extend conventional teaching methods.

- Higher Education Institutions need to tap the potential and advantage of ICT towards engaging and enriching 21st century higher education students learning experiences.

- Will the use of MIT-BLOSSOMS interactive video (embed into it critical and thinking) equip students with job creation skills?

Research Purpose

To explore the perceptions of UTM academic staff towards the use of an

interactive learning environment

MIT BLOSSOMS

in enriching 21st century higher education students' entrepreneurial skill specifically on job creation.

Research Methodology

12 UTM academic staff volunteered to view an interactive video lesson from the

MIT BLOSSOMS web site.
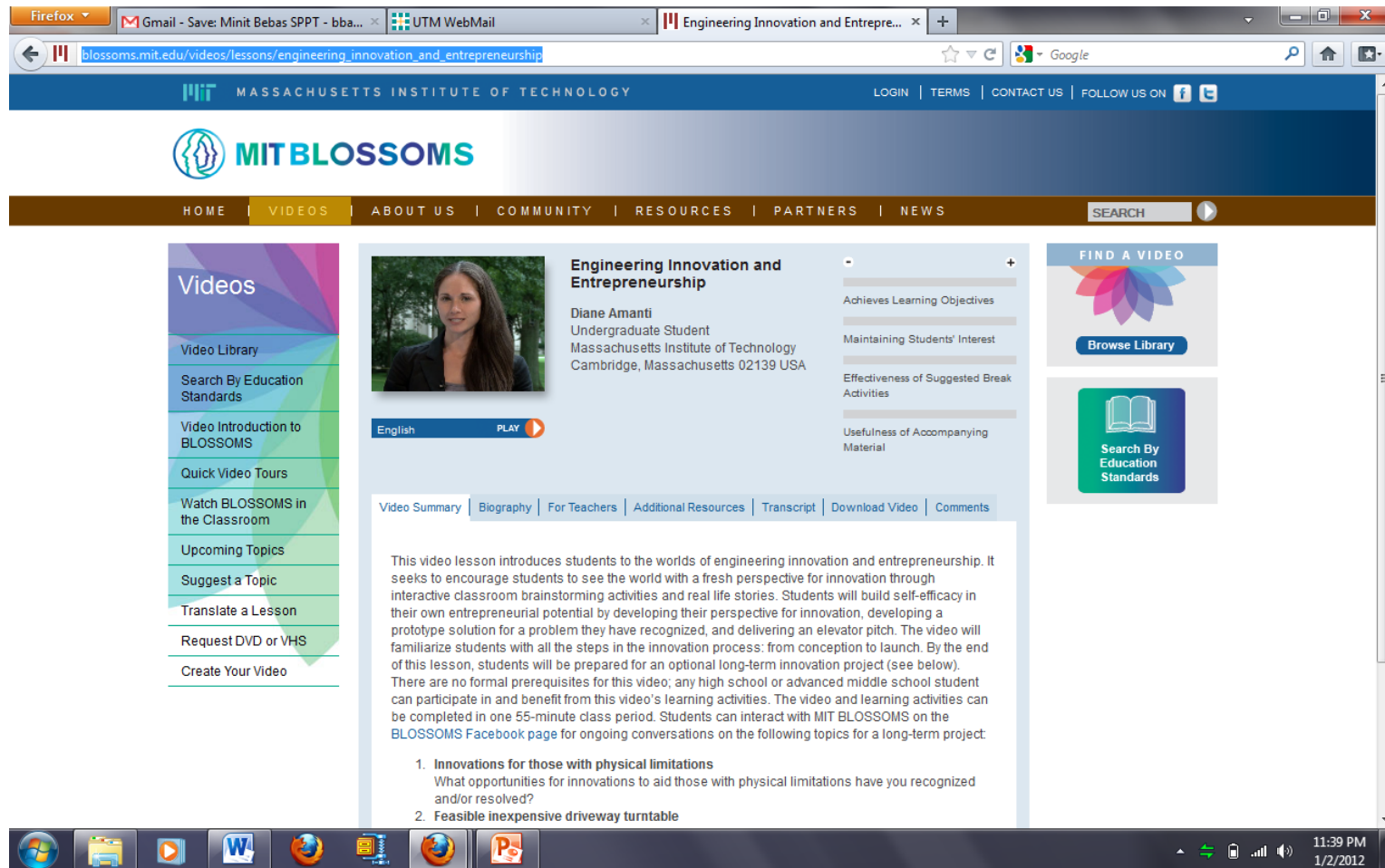
MIT BLOSSOMS
Blended Learning Open Source Science or Math Studies

http://blossoms.mit.edu/

MIT BLOSSOMS

http://blossoms.mit.edu/videos/lessons/engineering_innovation_and_entrepreneurship

SAMPLE VIDEO

MIT BLOSSOMS [Video] on

Engineering Innovation and Entrepreneurship

(3 minutes)

innovative ● entrepreneurial ● global

MIT BLOSSOMS

http://blossoms.mit.edu/videos/lessons/engineering_innovation_and_entrepreneurship

The video can be downloaded as follows:

Research Methodology

Interviewed how 12 UTM academic staff perceived the video lesson will be able to help enrich entrepreneurial skill specifically on job creation among higher education students.

Research Findings

Specific findings include 5 criteria:

1. Content

All the academic staff agreed that the content in the MIT-BLOSSOMS video lesson is suitable to enrich entrepreneurial skill specifically on job creation among students. The content is systematically planned and well-structured.

Academic staff A8 expresses:

The contents were stimulating. Enough concepts were included in the video lesson that makes the lesson clear. Also, the developments of the concepts were very clear and systematic. Overall, I personally think the MIT-BLOSSOMS video lesson did improve my knowledge on systematic steps towards being an innovator, job creator and entrepreneur. If it works for me, I am confident that it will work for UTM students.

Research Findings

Specific findings include 5 criteria:

2. *Flexible delivery*

All the academic staff perceived that the structure of the MIT-BLOSSOMS video lesson is user-friendly since it allowed them to move freely and can repeat the same lesson as many times as they wanted. Digital technologies have the potential to support and shape a pedagogy which is more active, participatory, personalized, flexible, and inclusive .

Research Findings

Specific findings include 5 criteria:

3. Individual pace

All the academic staff agreed that the MIT-BLOSSOMS video lesson allows users to work at their own pace. The learner can actively participates in the construction of knowledge through situated and authentic tasks on individual basis to support deep, rather than surface, learning (Lai, 2008).

Academic staff A12 reacts:

After using the MIT-BLOSSOMS video lesson, I feel like wanting to get more of such videos lessons.

Research Findings

Specific findings include 5 criteria:

4. Team working

All the academic staff agreed that the MIT-BLOSSOMS video lesson can help promote students to work in groups and produce a project that can be executed by a group of students. This MIT-BLOSSOMS video lesson can also encourages and improves discussion, interaction and collaboration among students.

Research Findings

Specific findings include 5 criteria:

5. *Availability of computer*

There was a word of caution among the participants. They said that students will be unhappy with computer based learning if support is lacking. Instructor's support is also essential while students are using MIT-BLOSSOMS video lessons.

Academic staff A3 confesses:

I thought I would get burned out in teaching, but now I am excited about teaching again. This time around, I will try to use computer and information technology. Thanks to the MIT-BLOSSOMS video lesson. It really helped me think, and give me ideas about what I can do in the classroom.

Conclusions and Limitations

All 12 UTM academic staff participated in the study were positive towards the use of MIT-BLOSSOMS in enhancing UTM 21st century higher education students' entrepreneurial skill specifically on job creation.

Blended learning can leverage the advantages of both F2F and digital teaching materials (Lou et al., 2011; Shih, 2011).

However, there are some limitations to this study that include:

Small sample size during the interview sessions.

Need to incorporate other strategies of data collection such as observations to observe how students approach learning.

MIT-BLOSSOMS
(UTM and MIT Collaboration - September 2011)

THANK YOU FOR YOUR ATTENTION

For further information, contact:
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