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The Integration of Animation in Learning Fundamentals of Entrepreneurship: Student Motivation

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Abstract

The purpose of this study is to measure the level of motivation in students following a new approach in teaching and learning of Fundamentals of Entrepreneurship using software created by Powtoon company. The researcher has redeveloped the content of one of the lessons using this software. A sample of 35 undergraduate students (Degree level) from the Art and Design Faculty of University Technology MARA, Perak Campus was randomly drawn to participate. All the participants were previous students of this subject during their diploma level. The researcher introduced them to the new lesson (which was integrated with animations) and feedback was obtained by questionnaires. In addition, 5 selected students and 2 educators were also interviewed. This research involved qualitative and quantitative methods. All data gathered from the questionnaire and interviews were analyzed and discussed in the findings. The results affirmed that when both educators and students are happy, the teaching and learning processes will become more effective thus contributing in the increase of learning motivation and satisfaction.

Keywords: Animation, Learning Fundamentals of Entrepreneurship, ARCS Model, Motivation

Introduction

Economic growth developed rapidly over these years. Every country in the world has strengthened and fine-tuned their strategies to stabilize their country's developments especially in citizen living costs issues. In Malaysia, the government perceives that entrepreneurial field is one of the key to solve this issue while at the same time generating income for the country. Today, entrepreneurial fields have become one of the important agenda highlighted amongst Malaysians. Taking this seriously, the government has worked hard to promote the benefits of

entrepreneurship. They provided numerous programs and advertising approaches to broaden up the people's mindsets. Arasteh et al. (2012) stated that the entrepreneurs are acting as agents for change and wealth creation. This proves that for those who yearn to change their lives for the better need knowledge in entrepreneurship.

According to Royo, Sarip, and Shaari (2014), the entrepreneurial learning involves the transformation of experience and knowledge to gain a positive outcome. It also incorporates awareness, reflections, associations and applications. Therefore, it was established that everyone exposed to this method of learning has a potential to generate income and at the same time contributing to the growth of the country.

Boosting these efforts, entrepreneurial learning has been spread to universities and institutional levels to encourage the undergraduates to be involved in this field after graduation. Hence by creating this course as a university subject, the subject now becomes a requirement and is compulsory for undergraduates. Qualified educators are responsible to deliver the knowledge and using their creativity to try and captivate these students to learn and develop interest in the subject. Seemingly this lesson is about the fundamentals of entrepreneurship, hence its lessons are basically in the form of facts with a lot of texts. The researcher found that the slides used for presentations were full of words and very dry. The researcher believed that because of this, all the students involved needed extra effort to stay focused in class, eventually losing interest and not attending class in the end. Thus, the purpose of this research is to determine the level of motivation among undergraduate students on the Entrepreneurship subject with a new approach on the slide presentations.

Literature Review

Encouraging people to accomplish something new needs a lot of effort and good strategy in order to draw positive results. In this study, undergraduate students were the main target to disclose the entrepreneurial world to. Undergraduate students (19-23 years old) are categorized as youths or Millennials, also demographically known as Gen Y. According to Mahadi, Jamaludin, & et.al (2016), this Gen Y group was born in the era of digital world where they are very quick to adapt to the advances of technology and seem to be always armed with gadgets. Today's vast usage of technology, where these technologies can be used to effectively optimize the entrepreneurial activity, is the reason why entrepreneurial learning needed to be introduced at the higher learning institutional level. Therefore, this exposure is an attempt to boost a well planned and holistic entrepreneurship development in the students.

Entrepreneurial Learning

Fundamentals of Entrepreneurship is one of the university core subjects in University Technology MARA. In this course, students are exposed to the theoretical and practical aspects of entrepreneurship. The contents of this learning covers the overview of the entrepreneurship path and the opportunities in careers. Wang (2004) claimed that previous empirical studies of entrepreneurial tendency amongst students while in university had shown a positive sign to produce a future entrepreneur after university. Hence, educating entrepreneurship knowledge among youth is one of the strategies to spark the entrepreneurial attitude and deep understanding of it (Kourilsky and Walstad, 1998). Simultaneously, this education actually

emboldens the entrepreneurial spirit and moves students to create an innovative and creative business parallel to the consumer demands over the years.

Animation

According to Schnotz and Lowe (2008, p.304) an animation is defined as a pictorial display that changes its structure or other properties over time and which triggers the perception of a continuous change. In other beneficial point, the animation is providing the direct visualization of tricky steps in a process, to avoid misinterpretation and cognitive overload (Tversky et al., 2002). The use of animation in education in this technology era is a need in order to enhance the teaching and learning process efficiently. In addition, this strategy aims to help an educator to accelerate the students' understanding during a learning process. Ainsworth & VanLabeke (2004) stated that in computerized learning environments, animations are frequently employed in order to enhance students' understanding of both complex processes and abstract concepts that change in time and space. Plus, it helps the mind to easily memorize and understand biological processes, natural phenomena, mechanical devices etc. (Berney and Bétrancourt, 2016). This statement is acceptable because animation can attract students' attention and focus especially in theoretical class. Students can grasp the knowledge quickly and are able to pinpoint the key concept. Normally, educators have prepared their theoretical classes with texts-filled slides during lecture and notes to be handed out. At this point, an integrating animation in learning can act as a powerful teaching tool in order to transform a theoretical class into an interesting and exciting class.

PowToon

PowToon company created the software (cloud-based software- SaaS) purposely to help the presenter to improve their presentation slides, making them more interesting, attractive and outstanding. This software is meant for anyone but especially educators or teachers who are able to create animated presentations and animated explainer videos. This software provided a few ready-made characters with lots of gestures, animated backgrounds and texts to be placed into the slides. It can be used as movie or slideshow. Interestingly, audio can also be imported into the slides. The presenter can record the sound and then acts like a narrator if they need to explain further.

ARCS Model

Motivation can be interpreted as the direction and magnitude of behavior that people choose to seek their goals (Keller, 2010). From educational perspective, motivation is when students give full attention and participation during learning processes which leads to achievement of learning objectives (Steinberg, 2005). Educators are not capable to control students' motivations but they can stimulate it. According to Keller (1987), there are four basic human characteristics that provide a basis for aggregating the various concepts, theories, strategies, and tactics that can influence students' motivation to learn. These four elements form an ARCS Model.

ARCS Model of Motivation is an instructional model developed by John Keller. It is based on the idea of four key elements in learning process which can encourage and sustain learners' motivation. It is important to motivate learners, and ensure the continuity of the motivation during instructions. The four elements of the model are *Attention, Relevance, Confidence* and

Satisfaction (ARCS). Instructional Designers can use Keller's ARCS Model to develop engaging learning activities.

The ARCS Model:

Attention

Attention refers to the learners' interest. It is important to sustain learners' interests and attention. Keller suggested that attention could be obtained either by perceptual or inquiry arousal. In the case of perceptual arousal, the learners' attention could be achieved through surprise, doubt or disbelief. For inquiry arousal, the learners' curiosity would be stimulated by challenging problems that need solutions.

Relevance

Even if curiosity is aroused, motivation is lost if the learning content has no perceived value to the learner. A successful lesson should exhibit the usefulness of its content. This allows learners to bridge the gap between lessons and the real world. In order to accomplish this, educators are encouraged to use language, analogies or stories to which the learners can relate.

Confidence

This component focuses on developing success among learners which allows them to control their learning process. If the learners feel they won't be able to accomplish their goals, their motivation will decrease. Therefore, educators should instill a sense of confidence in learners by helping them believe that they can succeed.

Satisfaction

The ARCS model presents a direct link between satisfaction and level of motivation, either intrinsic or extrinsic. There is a direct relation between motivation and satisfaction. Learners should be proud and satisfied of their achievements during the learning process.

Methodology

This research involved quantitative and qualitative methods using questionnaire and interview as instruments for data gathering. The research was divided into 3 stages. The first stage was conducting interviews with 5 students and 2 subject experts. The interview was aimed to collect suggestions, opinions and experiences that they went through. The data will be analyzed before the next stage begins. Then, in the second stage, 35 undergraduate students of Faculty of Art & Design (previously students of this subject during diploma level) participated to experience the new learning approach. The lesson chosen was recommended by the expertise by enhancing the content using Powtoon software. Lastly, for the third stage, questionnaires were distributed to all the participants from the second stage to answer.

Quantitative Data Analysis (Questionnaire)

In this study, the researcher adapted the questionnaire from the Instructional Materials Motivation Survey developed by Keller (1993). There were 2 parts of the questionnaire, demographic information and instructional materials motivation survey which consist of 36 items in the scale. The items were designed using a five-interval scale of *not true*, *slightly true*,

moderately true, mostly true and very true. The questionnaire constructed consisted of elements, *Attention* (12 questions), *Relevance* (9 questions), *Confidence* (9 questions) and *Satisfaction* (6 questions). All the data were collected using SPSS 24 packet program. The value of Cronbach's Alpha was determined for each element and the results are shown in Table I.

Table 1: Cronbach's Alpha value

Scale	Cronbach's Alpha
Attention	.703
Relevance	.795
Confidence	.654
Satisfaction	.819

The value of Cronbach's Alpha in the table shows that the item in the questionnaire were reliable (relatively high internal consistency) and suited for this study with values of, 0.703 (*Attention*), 0.795 (*Relevance*), 0.654 (*Confidence*) and 0.819 (*Satisfaction*).

The Sampling

Table II: Year of study

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	First	13	37.1	37.1
	Second	8	22.9	60.0
	Third	14	40.0	100.0
Total	35	100.0	100.0	

Participants in this study were 35 students from Faculty of Art and Design; 22 female and 13 male ($M=1.63$, $SD=8.55$). They had studied Fundamentals of Entrepreneurship subject during diploma level. Currently they are pursuing degree programmes at the same faculty. As Table II illustrates, they consisted of 13 students of the first year, 8 students of the second year and 14 students of the third year.

Results and Discussion

Total mean score and standard deviation (SD) for *Attention*, *Relevance*, *Confidence* and *Satisfaction*

The data was set separately according to the elements set in the ARCS Model. Table III below shows the result of total average mean score and standard deviation for each elements and the average.

Table III: Year of study

Scale	N	Mean score	SD
Attention	12	2.875	.792
Relevance	9	3.688	.824
Confidence	9	3.424	.929
Satisfaction	6	3.852	.818
TOTAL/AVERAGE	36	3.460	.841

From the results Table III, it was found that *Attention* has the lowest value of mean score with 2.875 compared to *Satisfaction* which projected the highest mean score of 3.852. Meanwhile with the second highest mean score value of 3.688 is *Relevance* followed by *Confidence*, 3.424. However, the average value of mean score for the overall shows positive sign towards students' motivation on the new approach in teaching presentation for Fundamentals of Entrepreneurship subject with total mean value of 3.460 (above moderate level) while the average SD value is 0.841. The SD value also represented the respondents' response in the questionnaire which was tabulated by the same answer that was indicated from the mean score.

Descriptive analysis on Attention (A)

Table IV: Descriptive analysis on Attention; mean score

Attention item	N	Mean score	SD
The quality of the writing and fonts helped to hold my attention	35	4.26	1.010
The lecture materials are so abstract that it is hard to keep my attention on it	35	1.34	.482

The highest mean score (M=4.26, SD=1.010) and the lowest mean score (M=1.34, SD=0.482) are shown in Table IV above for *Attention*. These results illustrate that majority of respondents agreed (M=4.26) with the statement regarding the *quality of writing and fonts helped to hold their attention* during the lecture session. However, the SD value (SD=1.010) revealed that one correspondent did not. The statement of *lecture materials are so abstract and hard to keep the attention* shows their unanimous disagreement to it, with the SD value of 0.482. Apparently, the researcher has transformed the slide presentation into the animated graphic and simplified the texts. Consequently, with the new changes, the researcher can claim that the new approach has attracted the students' attention.

Descriptive analysis on Relevance (R)

Table V shows that majority of respondents agreed with the statement of *how important to complete the lesson*; (M= 4.31, SD= 0.718). From the mean result, researcher believes that every student aim to score good results in the subjects they partake. On the other hand, the second statement for *Relevance* shows that most of the respondents did not agree with M=2.54 towards *the lessons are not relevance to my needs because I already know most of it*. Even so, the SD value, 1.094 revealed that a few respondents had agreed with the statement. This is because of the factor of sampling was taken from previous students of this subject during diploma level.

Table V: Descriptive analysis on Relevance; mean score

Relevance item	N	Mean score	SD
Completing lessons successfully is important to me	35	4.31	.718
The lessons are not relevance to my needs because I already know most of it	35	2.54	1.094

Descriptive Analysis on Confidence (C)

The descriptions for *Confidence* are referred in the Table VI. The results found that; *the exercises in the lesson are too difficult* has the value of, $M=2.80$; $SD=1.052$. This is because most respondents still remember the lessons taught while a few minority has totally forgotten them. For the second statement, *good organization of content materials will influence their confidence level*, majority of the respondents agreed with it ($M=3.97$; nearest 4.0 value) with $SD=0.707$. It represents their specific opinion in the way the teaching and learning techniques were presented. If the educators are able to deliver good lesson plannings and strategies, researcher thinks that the students' appreciation could be built along with their confidence.

Table VI: Descriptive analysis on Confidence; mean score

Confidence item	N	Mean score	SD
The exercises in the lesson are too difficult	35	2.80	1.052
The good organization of the content helped me be confident that I would learn the material	35	3.97	.707

Descriptive Analysis on Satisfaction (S)

All the respondents agreed in *Satisfaction* elements with a mean score of ($M=3.54$, $SD=0.817$) on both; ($M=4.11$, $SD=0.758$). *Praising word/feedback towards students* proved that it pays to give them appreciations and somehow inspires their motivation towards learning. Whereas the second item of *it is a pleasure to work on such a well-designed material* showed that they are really open to receive new style of learning as long as it accommodates their environments. The results are shown in Table VII below.

Table VII: Descriptive analysis on Satisfaction; mean score

Satisfaction item	N	Mean score	SD
Good feedbacks after exercises helped me feel rewarded for my effort	35	3.54	.817
It is a pleasure to work on such a well-designed material	35	4.11	.758

Qualitative Data Analysis (Interview)

Two course educators from Business Management Academic Centre and five undergraduate students from Faculty of Art and Design had been interviewed for this study. The interview sessions with the educators covered ten open ended questions on their experiences and difficulties while handling the Fundamentals of Entrepreneurship subjects among art students. Whereas, the students also covered ten open ended questions on their experiences and suggestions regarding that subject that they have been taught during diploma level. The interview sessions between educators were done on the phone and a person to person interview for the students. Table VIII below illustrates results from the interview sessions. The results consist of six of the total questions that were beneficial and useful for this study.

Table VIII: Results from interview sessions

Question	Point of view among educators	
	Yes	No
Do you have difficulties to deliver the lecture among art students?	Educator 1,2: <ul style="list-style-type: none"> • Sometimes depends on the students intake.. 	
How can you describe your presentation slides every week?	Educator 1: <ul style="list-style-type: none"> • The slides were prepared by the experts • Lots of texts Educator 2: <ul style="list-style-type: none"> • The slides are quite boring, no picture or multimedia approach • Very plain.. 	
How may you evaluate from scale 1 to 5 of student's attention during your lecture class? (1=poor, 5=excellent)	Educator 1, 2: <ul style="list-style-type: none"> • Most of the time scale 1 and several 2... Educator 2: <ul style="list-style-type: none"> • Very little scale 4 and 5 	
Do you think the students can give positive feedback towards this subject if the slides presentation was upgraded with animation approach?	Educator 1,2: <ul style="list-style-type: none"> • Yes 	
Point of view among students		

<p>Do you still remember what you have been taught during class lecture of this subject? What grade did you receive?</p>	<p>Student 2:</p> <ul style="list-style-type: none"> I like this subject, I got an A 	<p>Student 1,3,4:</p> <ul style="list-style-type: none"> Can't remember at all... Got a C grade. <p>Student 5:</p> <ul style="list-style-type: none"> I failed for the first time and got C after I repeated....
<p>How can you describe this subject? Do you think it is good?</p>	<p>Student 5:</p> <ul style="list-style-type: none"> This subject is very interesting for those interested to run a business... Yes, it is good and very useful. <p>Student 1</p> <ul style="list-style-type: none"> At first, during study I did not understand why I have to learn this subject <p>Student 2,3,4:</p> <ul style="list-style-type: none"> The lecture is so boring and most of the time I was so sleepy... I am not sure if it is good for me... 	

Conclusion

It is challenging for educators nowadays to transfer factual knowledge especially to art and design students. The students are more inclined towards creative arts and they can imagine things in their own way. If the students are not interested in the knowledge that is being transferred in the teaching and learning process, the failure rate becomes higher. This is most observed in dry factual subjects. Thus, it will influence their motivation to learn hence affecting their examination results. Previously, studies of human learning showed that motivation is a learning key (Crookes & Schmidt, 1991). Hence, an educator needs to find a solution or improvise on the teaching and learning technique in order to enhance the students' motivation and improves their performances. Educators also need to be more adaptable to new technology developments and incorporate them into their lessons. The student population changes year by year so educators have to be open to receiving and implementing the advanced technologies to tackle the needs of the new generation.

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