
Assessing the effectiveness of using western movies in elucidating economic concepts

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Abstract: The use of innovative techniques in teaching and learning has gained ground in Malaysian higher education institutions. Educators use a variety of modern methods to enhance the delivery of the contents of academic subjects, including economics. Among the various approaches, educators use movies to elucidate economic concepts and relate them to real-world phenomenon. Using questionnaire survey, this study aims to assess the effectiveness of using western movies in explaining economic concepts to first semester undergraduate students who took introductory economic courses at the Faculty of Business and Management at UiTM Sarawak. Our results show positive responses on reaction levels and perceived learning outcomes by students with the average mean scores of 7.48. However, the results reveal that there was no association between students' assessment marks and perceived individual achievement. Several recommendations are advanced on using digital learning in the economics education.

Keywords: economic concepts; short video clips; teaching and learning; western movies.

Reference to this paper should be made as follows: Ting, S.K., Yong, S.W., Lai, T.W., Subramaniam, G. and Dollery, B. (2021) 'Assessing the effectiveness of using western movies in elucidating economic concepts', *Int. J. Education Economics and Development*, Vol. 12, No. 1, pp.45–60.

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1 Introduction

The use of innovative instructional methods has become common in the recent decades in the higher education institutions worldwide. In addition to conventional 'chalk and talk' lectures, economic educators use a variety of innovative approaches, including classroom

games, simulations, experiments, case studies, online assignments and field visits, to enrich the teaching and learning experience (Yamarik, 2019; Carrasco-Gallego, 2017). There is a growing trend towards using modern instructional methods in teaching and learning economics. Recently economic educators have employed movies, music, videos and TV shows to explicate economic concepts to students.

The effectiveness of traditional and modern methods in learning and teaching economic courses is uneven. Traditional lectures represent unidirectional monologue and they are often criticised as being comparatively ineffectual (Williamham, 2009). Theories are often allegedly too difficult, hypothetical and laden with long lists of assumptions and narrations (Shiller, 2017). Students frequently struggle on grounds of their young age, attitudes and limited experience of linking real-world phenomena to economic concepts (Bosshardt, 2004; Brant, 2015).

However, traditional lectures do not necessarily lead to negative results. It is frequently argued that pedagogical innovations undermine teaching and learning since instructors are burdened and exhausted by preparing innovative teaching methods and students are distracted by new technologies in the learning process (Gehlen-Baum and Weinberger, 2014; Gaudreau et al., 2014). Nevertheless, contemporary economics teaching relies on various technologies, especially social media such as Facebook, blogs and Youtube, movies, music, video and TV series. These are downloadable and they are widely used by both instructors and students for academic purposes. Kuhn et al. (2018), Mateer et al. (2016), Ghent et al. (2011), Luccasen and Thomas (2010) and numerous other scholars have found that films are very useful in explaining economic concepts. The net outcome of using conventional and innovative instructional methods thus remains inconclusive and further empirical research is essential.

Against this background, the main objective of this study is to assess the effectiveness of using Western movies based on the 100 movie lists by Mateer et al. (2016) to define economic concepts among first semester students who take introductory economic courses at the Universiti Teknologi MARA Malaysia (UiTM), Sarawak. Specifically, the study aims to:

- a evaluate the level of reaction of respondents to using Western movies in explaining economic concepts
- b evaluate the level of perceived learning outcomes by respondents
- c identify whether the use of Western movies influences respondents' academic performance
- d offer some recommendations for the adoption of movies in economics education.

The empirical analysis of the effectiveness of teaching technologies using movies in economics is important for several reasons. These include enhancing teaching and learning techniques using movies to produce innovative and independent students in line with the 11th Malaysia Plan 2016–2020 in order to accelerate human capital development, as well as promoting the learning of language and culture through movies.

The paper is divided into five main parts. Section 2 provides a synoptic literature review of the use of social media in the academic curriculum. Section 3 outlines the methodology employed in the paper, while Section 4 discusses the empirical results. The paper ends with some brief concluding remarks in Section 5.

2 Scholarly perspectives on movie pedagogies

In general, scholars employ technology acceptance model (TAM) to examine the perceptual impact of social media technology on student's academic learning and achievement. The theoretical model is based on Davis (1989). The two main factors are involved: the perceived ease of use and perceived usefulness of technology on student's learning and performance.

There is a growing literature on the use of ICT in teaching economic subjects and explaining economic concepts. Wooten (2020) and Picault (2019) provide excellent literature reviews of creative methods of teaching economic concepts. Empirical studies demonstrate the positive influence of the use of movies, video, music, novels, short stories, comics, poetry, video games, and recreational books on teaching economic subjects and explaining economic concepts.

The merits of using movies, films or Youtube clips in teaching and learning economic concepts are widely reported in the literature. For instance, Exposito et al. (2020) report that the use of movies enabled students to achieve higher test scores. Using 41 economic instructors' rating in Germany, Kuhn et al. (2018) unveiled positive relationship between the use of video-based tools for formative assessment and the enhancement of performance in teaching economics. Employing a survey at three US universities, Al-Bahrani et al. (2016) found that the selection of television shows and music by economic instructors influenced the pedagogical efficiency.

In addition, Carrasco-Gallego (2017) found that Youtube clips contributed to students' understanding of economic concepts by helping them appreciated their applicability to the real world. Murray and Nunley (2018), Mateer et al. (2016) and Calhoun and Mateer (2012) reported that the use of videos and movies enhanced the engagement and understanding of student in learning economic concepts. Sexton (2006) established that well-selected videos could provide a more concrete framework and improved the retention of economic concepts among students. Samaras (2014) and Luccasen and Thomas (2010) found a positive relationship between active discussion and the use of movies in teaching and learning economic concepts.

The uses of movies in other academic subjects are also reported in the literature. These subjects include languages, mathematics, science, political science, law, tourism and others (Haghverdi, 2015; Brooks et al., 2012). These empirical studies also demonstrate positive outcomes on the use of movies in student' performance, including the active engagement of students, better academic performance, higher class attendance, and improved learning language in reading, grammar and vocabulary.

The use of other innovative methods, such as the use of social media technologies on teaching and learning, are widely reported in the literature. The empirical outcomes of the use of social media in education are mixed. Several benefits have been found, including active student engagement (Moghavvemi et al., 2018; Chen et al., 2010; Junco et al., 2011), quality teaching performance (Wang et al., 2018), effective communication between lecturers and students (Alwi et al., 2014), and active collaborative learning and engagement (Al Rahmi et al., 2018; Al-Rahmi and Zeki, 2016). The negative outcomes on learning and teaching in the literature include socialisation and engagement in lecture-unrelated activities, such as net surfing, checking e-mail and networking (Gaudreau et al., 2014; Gehlen-Baun and Weinberger, 2014).

In general, the results of the empirical analysis of the use of innovative educational methods and its effectiveness in academic curriculum are mixed. Current Malaysian

empirical studies focus on the use of Youtube in teaching and learning (Moghavvemi et al., 2018), effective communication via social media (Alwi et al., 2014), and social networking (Helou and Rahim, 2014; Hamid et al., 2011). However, to date, there has been no empirical analysis of the impact of movies in teaching and learning of economics in Malaysia.

There has been a long association between Western movies and Malaysian culture for a number of reasons. These include English language proficiency in the British colonial era, globalisation, and the openness of Malaysian international trade policies (Hisham, 2019; Lee et al., 2017). There is high demand for Western movies amongst Malaysians (Nagaraj and Mustafa, 2019; Liew and Lee, 2012). The Western concepts centred on modernity, democracy, consumerism and individualism have been imported and adapted into local daily life via mass media, such as movies, television programs and music (Ishak, 2011; Mustafa and Salleh, 2014). As a result, Western culture has become important in contemporary Malaysia.

This study aims to assess the effectiveness of using Western movies in explaining economic concepts to first-year undergraduate students at the UiTM, Sarawak. Western movies, particularly Hollywood movies, have large audience across the globe regardless of the language, colour, religion or the socioeconomic status of movie goers. We seek to provide additional insights to the existing empirical literature on the effect of movies on student learning performance.

3 Methodology and data

3.1 Method

We conducted a multi-method research to assess the effectiveness of using Western movies in explaining economic concepts. We collected quantitative data using a questionnaire survey and then analysed these data using statistical procedures. We also employed open-ended questions to gain additional insight into respondent perceptions. Respondents of this study consisted of semester one (March–June 2018) undergraduate students, who took introductory economic courses in UiTM, Sarawak. The study follows the research guidelines as stipulated in the Malaysian Code of Responsible Conduct in Research to ensure that the ethical principles of research are followed (MCRCR, 2017). The respondent names and personal data remain private and confidential. The details of the research design are shown in Table 1.

The processes followed in the study are summarised as follows:

- a A take-home assignment was prescribed to students in the 1st week of March 2018, as part of the midterm assessment carrying 10%.
- b Given that not all movies are suitable for learning economic concepts, students selected one movie from the 100 movie list by Mateer et al. (2016) or any recent Western movies.
- c Apart from studying the economic introductory course through face-to-face lectures, students watched the selected movie and then wrote a report on economic concepts of than 2,000 words at home.

- d Lecturers explained the requirements of the report.
- e Students submitted the report and completed the questionnaire to evaluate the effectiveness of using movies to define economic concepts at the end of the semester.
- f Lecturers marked and graded the report.

Table 1 Research design

<i>Specific objectives</i>	<i>Techniques</i>	<i>Instruments of study</i>
Demographic background of respondents	Frequencies	1 Questionnaire: program, gender and selection of movies
Evaluation on level of reaction	Central of tendency (mean)	1 Questionnaire: project objectives, learning tools, approach and effort
Evaluation on level of perceived learning outcomes	Central of tendency (mean)	1 Questionnaire: film, individual achievement and satisfaction
Influence on results performance	Spearman's Rho correlation test	1 Questionnaire: scores of individual achievements 2 Assessment marks of reports
Policy recommendations	Coding of all feedbacks into main categories	1 Questionnaire: Open-ended questions 2 Literature review 3 Subject lecturers 4 Current university policies

3.2 *Questionnaire and report*

Following Brooks et al. (2012), we adopted the questionnaire by modifying its contents to meet the aims of the study. The questionnaire consisted of four main sections: demographic background, level of reaction, level of perceived learning outcomes, and open-ended questions. The learning performance of students consists of academic excellence as well as skills and attributes, which are highly valued by employers (Boyles, 2012). Thus, the questionnaire measures the level of reaction and perceived learning outcomes through both dimensions:

- a economic knowledge
- b skills and attributes such as critical thinking, creative thinking, and decision-making.

A ten-point Likert scale from 'least agreed = 1' to 'very agreed = 10' was used to measure the level of reaction and the level of perceived learning outcomes. We used the IBM SPSS to analyse the questionnaires.

The questionnaire method was used because it allows the collection of standardised data in a highly economical way. We could get larger, authentic and reliable information through open-ended questions. Other methods – as interviews and inquiry – were not used to avoid pressure or intimidation upon students, while the structural equation modelling was complex. Although the questionnaire method is subjected to bias and

uninformed responses from respondents, it is sufficient to investigate all the research objectives of the study.

The submitted reports were marked by the course lecturers based on the following seven assessment criteria: definition of concepts, explanation and application of economic concepts using movies, relevancy of economic concepts and movies or narration, personal perception, language, references and novelty. The first four criteria were directly related to economic concepts, while the remaining three criteria are important to present the report in meaningful terms.

3.3 Demographic background of respondents

In this study, two economic classes – Macroeconomics (ECO211) and Economics (ECO415) – were chosen to undertake the project of defining economic concepts by watching Western movies. These courses are introductory economic courses and taken by semester one students. The purposes of introductory course are to expose students to the principles of economics, cultivate interest and motivation, and describe how the economy works.

Table 2 Demographic background of respondents

<i>Courses</i>	<i>Items</i>	<i>Number of sample</i>	<i>Percentage (%)</i>
<i>Programme codes</i>			
ECO211	AM110	29	34.1
	AC110	24	28.2
ECO415	BA232	32	37.6
	Total	85	100
<i>Gender</i>			
	Female	70	82.4
	Male	15	17.6
	Total	85	100

There were 281 students who took ECO211 and ECO415 in the semester and only 94 students participated the project randomly. There were 86 students who answered the questionnaire at the end of the semester. A sample size of 72 respondents is needed to estimate a 95% confidence level with 10% confidence interval in this study (Hill et al., 2018). Thus, the number of respondents fulfils the minimum requirement to perform the analysis meaningfully. The details of the demographic background of respondents are summarised in Table 2. From 86 questionnaires, one questionnaire was excluded from the analysis due to its incomplete answers. Thus, only 85 questionnaires were used. Out of 85 students, 53 students (62.4%) enrolled ECO211, while 32 students (37.6%) were registered in ECO415. These students studied in three different classes based on their program codes. 70 respondents (82.4%) were females and 15 (17.6%) were males, with age ranging from 19 to 26.

Table 3 shows the top ten movies which were selected by 85 students. These top ten movies were selected by 47 students (55.3%) from the 100 movie lists by Mateer et al (2016) or any recent Western movies. The students were given freedom to choose their favourite movie and uncovered the economic concepts from the movie and wrote the

report about the concepts to get assessment marks. The use of different movies was expected to relieve boredom, reduce plagiarism and provoke critical thinking among.

Table 3 Top ten movies selected by respondents

<i>No.</i>	<i>Name of movies</i>	<i>Frequencies</i>
1	<i>Limitless</i>	6
2	<i>Confessions of a Shopaholic</i>	6
3	<i>The Pursuit of Happyness</i>	6
4	<i>The Hunger Games</i>	5
5	<i>Charlie and the Chocolate Factory</i>	4
6	<i>Too Big to Fail</i>	4
7	<i>Black Panther</i>	4
8	<i>Slumdog Millionaire</i>	4
9	<i>Back to the Future</i>	4
10	<i>Monster Inc.</i>	4

4 Discussion of results

Overall, the mean scores of students on using Western movies to define economic concepts were recorded at 7.48. This result indicates that students are very positive with the method used to define economic concepts. The results show that the positive responses by students on the level of reaction (7.52) and perceived learning outcomes (7.44) are very consistent, with level of reaction recording slightly higher mean scores from the students. However, the results revealed that there is no association between the assessment mark and perceived individual achievement from the perspective of lecturers. The details of the responses from students and lecturers are explained in the following sections.

4.1 *Western movies and economic concepts*

The respondents watched and discovered economic concepts based on the movies. Some examples of economic concepts applied by the respondents are detailed in Table 4. The same economic concept, for example, opportunity cost, was repeatedly used by respondents using different scenarios. The respondents learn the economic concepts in the classroom over the semester and applied them when they watch the movies.

4.2 *Level of reaction*

Four components of reaction on assessing the effectiveness of movies to define economic concepts exist include: project objective, use of the movie as a tool of learning, approach and effort by respondents. The one represented 'least agreed' and ten represented 'very agreed' whereas five represented 'neutral'. The smaller value implies negative responses, while the larger value indicates positive responses by the respondents. Details of the reactions of respondents are listed in Table 5.

Table 4 Some samples of economic concepts using western movies

No.	Name of movies	Economics concepts	Explanation/narration based on movies	
1	<i>Limitless</i>	a	Bounded rationality	<i>Eddie</i> had limited capacity to anticipate and solve complex problems at his work place.
		b	Opportunity cost	<i>Eddie</i> took pill (NZT-48) to empower himself to become stock market genius at the expense of his own health where he suffered anxiety, pain and hallucination.
		c	Capital accumulation	<i>Eddie</i> started to make his wealth by borrowing \$100,000 from a Russian loan shark and invested in stock market, published book and running for US Senate.
2	<i>The Pursuit of Happiness</i>	a	Opportunity cost	<i>Christopher</i> gave up his job which sold medical devices and worked as intern at a broker firm.
		b	Human capital	<i>Christopher</i> had high school education background and limited his competitiveness with other applicants. Nonetheless, he also improved his skills and knowledge to change his intern position to full time permanent job.
		c	Capitalism	The financial problem eroded <i>Christopher</i> 's marriage, career, and self-esteem, and become homeless with his five years old son.
3	<i>The Hunger Games</i>	a	Scarcity	The citizens had food rationing and lived in hunger.
		b	Specialisation	<i>Panem</i> was made up of 12 districts with production specialisation, where each district specialises respectively on luxury, masonry, agriculture and mining.
4	<i>Back to the Future</i>	c	Opportunity cost	<i>Karniss</i> volunteered herself to fight in the game in exchange of her own sister's safety.
		a	Inflation	<i>Marty</i> discovered that the price of movie seat was only 50 cents in 1955.
		b	Gross domestic product growth	The infrastructures and real estate transformed from 1955 to 2015, as <i>Marty</i> travelled to 1955 via the Time Machine.
5	<i>Monster Inc.</i>	c	Employment	Various types of jobs were demonstrated in manufacturing and service sectors.
		a	Demand and supply	Monsters, Inc. is a utility company that employed monsters to supply electricity using screams from the children through their closet doors in order to lit up the monster world 'Monstropolis'.
		b	Production possibility frontier	The production of electricity was under the production possibility frontier as the city was having the energy crisis, given that the children were harder to scare off to get their screams.
		c	Self-sufficient economy	Monsters produced goods and services by themselves and banned contact with human because monsters believed all humans were lethally toxic.

Note: Words in italic refer to names of characters and venues in the movies.

Of four dimensions of reaction, extra effort by respondents achieved the highest mean at 8.2 and followed by use of movie as a tool of learning (7.66), approach (7.44) and project objectives (6.87). These findings suggest that respondents reacted moderately positively toward the use of movie to define economic concepts.

The positive reactions by respondents are highlighted by several higher mean scores. These include the fact that the respondents perceived that the approach was very creative (7.59), actors and actresses can present the economic concepts very well (8.52), and respondents understand the objectives of the project (7.20), and made the effort to understand the economic concepts by referring to the textbook and online sources (8.39).

Table 5 Level of reactions

<i>Items</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>
I understood the objectives of the project	3	10	7.20
I was able to explain economic concepts by using the film	2	10	7.05
This project is very easy to be completed	2	10	6.38
This project is very effective for me to learn about economic concepts	2	10	6.86
Project objectives	3.00	10.00	6.87
I found the film is easy to follow and understand	2	10	7.49
I found the film is engaging and interesting	3	10	7.89
I found the film is relevant to the economic concepts	3	10	7.56
I think the actors and actresses act very well	3	10	8.52
Only a small fraction of the film can be used to explain economic concepts	1	10	6.22
I need to understand the whole movie in order to relate to economic concepts	3	10	8.25
Tool of learning: film	3.83	9.50	7.66
I think this approach is very interesting	2	10	7.55
I think this approach is very creative	2	10	7.59
I can remember economic concepts easily now by referring to the film	2	10	7.19
Approach	2.00	10.00	7.44
I have gained knowledge by watching the film	3	10	7.89
I put in efforts in order to understand the economic concepts such as referring to textbook and online	4	10	8.39
I spent my quality time to watch and understand the movie	5	10	8.33
Efforts	4.33	10.00	8.20
Overall	4.31	9.69	7.52

4.3 *Perceived learning outcomes*

In terms of the level of perceived learning outcomes, the highest mean is recorded for satisfaction (7.52) and followed by individual achievement (7.44) and awareness of the film industry (7.36). Details of the perceived learning outcomes are reported in Table 6. Some notable observations include “I enjoyed myself watching the movies” (8.39), “I understand and appreciate the film as an art” (8.04), and “I improve my critical thinking”

(7.65). In other words, respondents have achieved some important learning outcomes, such as awareness of film industry, individual achievement and contentment throughout the project.

The performance of individual achievement findings which consist of both elements of knowledge of economic concepts, and skills and attributes, such as critical thinking and creative thinking, were consistent with the findings by Carrasco-Gallego (2017) and Calhoun and Mateer (2012).

However, lower mean scores are reported in the choice of career in the film industry (6.55) and the relevance of Western movies to Eastern culture (6.00). These findings are not unexpected given that the respondents' programs are in the business realm. In addition, Eastern culture is undeniable different from Western world due to differences in ideology, location, weather and language, which may influence and shape how respondents perceive movies in defining economic concepts.

Table 6 Perceived learning outcomes

<i>Items</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>
I am more aware of career options in film and creative industries	1	10	7.20
I understand and respect for creativity and intellectual property	3	10	7.65
I understand and appreciate of film as an art form	4	10	8.05
I would like to work in film industry in the future instead of economic-related industries such as finance, banking, retailing and management	1	10	6.55
Industry of film	3.75	10.00	7.36
I have improved my reading and writing skills through the project	4	10	7.64
I am more motivated to learn economic subjects	2	10	7.39
I improve my critical thinking	4	10	7.65
I improve my creative thinking	4	10	7.59
The project is a useful way of learning economics	3	10	7.45
I understand and remember the economic concepts easier through film	3	10	7.18
I can explain the economic concepts by using the scenes from the film	3	10	7.16
Individual achievement	3.71	9.86	7.44
I am more confident when I talked about movies with my friends	4	10	7.59
I enjoyed myself watching the film	2	10	8.39
The film is related to my culture	1	10	6.00
The project made me want to watch more movies in the future	4	10	8.04
I think we should use film in other subjects	3	10	7.56
Satisfaction	4.40	10.00	7.52
Overall	4.19	9.81	7.44

4.4 Open-ended questions

The open-ended questions consist of three aspects: like, dislike and suggestions, as detailed in Table 7. Overall, the opinions on these open-ended questions are mixed. The results show that 45 out of 85 respondents (52.9%) enjoyed watching movies. There were 23 respondents (27.1%) able to engage the economic concepts in the movies they

watched. 17 respondents (20%) reported that the project improved their other skills such as knowledge acquisition, writing and thinking skills. These findings echo Moghavvemi et al. (2018) and Wang et al. (2018), where the use of social media in the teaching and learning process enhanced respondent performance.

However, 40 out of 85 respondents (47.1%) reported lack of confidence because they were not sure whether the accuracy of the economic concepts related to the scenes of movies that they selected. 38.8% of respondents were not really satisfied because they had a busy academic schedule and felt bored watching movies. 7.1% of respondents reported differences in cultures between Western and Eastern movies, such as intimacy, language and ideology, while 5.9% of respondents had difficulties to understand the movie due to the accent of actors and actresses.

Several suggestions were put forward by respondents to further improve the project. 38 respondents (44.7%) proposed some suggestions such as no words limit on report, inclusion of non-western movies, and limit the choices of movies. 30 out of 85 respondents (35.3%) advocated other methods to define economic concepts, such as respondents produce short movies by themselves, presentation, or use short movie from YouTube to define economic concepts. 14 respondents (16.5%) suggested this project should be continued as it is an interesting way to learn economic concepts.

Table 7 Open ended questions

Questions	Comments	Number of respondents	Percentage (%)
Benefits	Enjoyment	45	52.9
	Engagement	23	27.1
	Other skills	17	20
Drawbacks	Lack of confidence	40	47.1
	Satisfaction	33	38.8
	Culture differences	6	7.1
	Language barrier	5	5.9
	No comment	1	1.1
Suggestions/improvements	Continuity of project	14	16.5
	Other methods	30	35.3
	Others	38	44.7
	No comment	3	3.5

4.5 Assessment of report: lecturers' perspective

The reports were marked by the course lecturers based on the criteria, as mentioned above. According to Spearman's Rho correlation results, as indicated in Table 8, there was no statistically significant association between respondent individual achievement and report scores, ($r_s(85) = 0.159$, $\rho > 0.05$). This indicates that the use of Western movies did not influence the respondent assessment marks. This result contradicts Exposito et al. (2020) where the use of video clip improved students' test scores.

The results were expected due to the differences in the perspectives of individual lecturers and students in defining economic concept using movies. Several reasons are

identified. Firstly, students and lecturers come from different socio-economic backgrounds and thus relate movies to economic concepts differently. Secondly, assessment marks are not solely based on what the respondents watched from the movies: the lecturers also included other factors such as novelty, language and writing skills to assess the respondent reports. Finally, the respondents may not be able to transfer what they watch from movies into reports successfully, due to differences in intellectual ability.

Table 8 Spearman's Rho correlation

<i>Items</i>			<i>Report marks</i>	<i>Individual achievement</i>
Spearman's Rho	Report marks	Correlation coefficient	1.000	0.159
		Sig. (2-tailed)	.	0.147
		N	85	85
	Individual achievement	Correlation coefficient	0.159	1.000
		Sig. (2-tailed)	0.147	.
		N	85	85

5 Conclusions

This paper has sought to assess the effectiveness of using Western movies to elucidate economic concepts among first semester undergraduate students who take introductory economic courses at the UiTM, Sarawak. The major finding of this paper is that respondents are positive concerning the use of movies to define economic concepts, with the mean scores of 7.48. However, our results also reveal that there is no association between these scores and individual achievement as determined by lecturers.

The positive responses from the respondents on the level of reaction and perceived learning outcomes of using movies are consistent with the TAM literature. Although there is no association between assessment marks and perceived individual achievement, the understanding of students of economic concepts is given a higher priority. The enjoyment of watching movies is an important source of motivation to cultivate interest among students on the study of economics. Lower marks are due to other assessment criteria, such as writing skills, novelty and language. Our findings thus represent a substantive addition to the empirical literature on the use of movies to define economic concepts.

Various policy implications derive from these results. Firstly, the adoption of Western movies into academic subjects can enrich the teaching and learning experience by lecturers and students alike. Moreover, the choice of movies can be extended to non-western movies, short movies from Youtube and short movie productions by students. The current policy of UiTM Sarawak also encourages both lecturers and students to become 'YouTubers' in all aspects of academic life.

Secondly, economic lecturers and students are encouraged to venture into movie-related innovation at university, such as radio stations, software, and other innovations which encourage students to use music, movies and TV shows in academic courses. This could indirectly generate potential revenue to higher education institutions.

Finally, lecturers can incorporate social media into the academic curriculum with assistance from industry partners in order to bring in latest movies and advanced technology to match current demand from students. The students can use local scenarios to produce short movies and relate the economic concepts directly to their daily lives. Other skills, writing and critical thinking, could be offered as complementary subjects to improve academic performance.

This study has several limitations such as small sample size and limited empirical assessment method. Thus, we suggest that future researchers could use larger sample sizes. Moreover, they could apply the same methodology to other discipline areas. Future researchers could also examine the effectiveness of using other media platforms, such as TV series, lyrics and Youtube, in teaching and learning.

Acknowledgements

This research received no specific grant from any funding agency in the public, commercial, or not-for profit sectors.

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