

TEACHING AND LEARNING OF ECONOMICS VIA e –ECONOMICS SUPPLEMENTS: THE WAY FORWARD IN OPEN AND DISTANCE LEARNING

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Abstract

The journey in an open and distance learning environment can be lonely and of an isolated experience. Apart from the limited face-to-face contact with instructors and course mates, learners may find it difficult to keep themselves engaged, motivated and focused. The scarce availability of teaching and learning resources also worsen the situation, causing poor performance amongst learners, especially for courses which are quantitative in nature. According to the American Theory of Equivalency, distance education institutions must create valuable learning experience for learners regardless of resources or instructions. Simonson et. al. (2000) emphasised the need to redesign learning materials to improve learning experience using various communication techniques. At the Open University Malaysia (OUM), The Economics Support Team (TEST) created and used *e-economics* supplements to enhance the teaching and learning experience for a course, Principles of Macroeconomics delivered via open distance education. The effectiveness of the supplements in improving overall performance of learners was observed. Results were tabulated and analysed using descriptive statistics and ANOVA. The outcome of the study will be useful for institutions to provide effective teaching and learning activities for Economics and other quantitative courses delivered through open distance learning.

Keywords: Teaching and learning activities, Economics, Assessment

Introduction

Although open and distance learning in the guise of correspondence learning has been existing in the recent years, there is relatively little in-depth analysis of its impact on and interrelations with other forms of learning. Open and distance learning has been a subject to many interpretations and meanings. Quantitative subjects such as economics, finance, accounts, mathematics are always a challenge to working adults' learners to grasp. One of the main reasons is they have been away from books and exams for many years. Open and distance learning is where learners learn and manage its learning mostly on their own and a strong emphasis on flexibility, the removal of barriers and a learner-centered philosophy. In Open University Malaysia, staying stagnant and static has never been the intention since it appeared on the education scene in 2001. Instead, OUM has constantly invented and introduce new learning approaches to its learners. It aims to make learning easier, happier and convenience to all, promoting life-long learning in Malaysia. Here, we try to do something new where *e-economics* supplements are given to students as extra academic materials. A team of five is formed called *The Economics Support Team (TEST)* to address the issue of difficulty in learning Economics. Principles of Macroeconomics are chosen rather than Principles of Microeconomics because the subject is a level-4 course where learners usually have difficulty to understand and grasp. The team, made up of 5 subject matter experts in the field of Economics, designed a unique teaching and learning supplement, *e-economics* to support a level-4 course, Principles of Macroeconomics.

In OUM, 80% of the proportion of OUM learning modes with approximately 95 hours of the whole semester is self-managed learning. OUM has over 70,000 learners who are mostly mature working adults. Bear in mind, these learners are working adult who has left school and exam for more than 5 years, some even a century or more. Hence, coming back to study and to take up courses such as economics can be a huge challenge for them, what more if the learners have to do it via blended pedagogy with minimum interacts hours with their tutors. In OUM, learners have 5 sessions of face-to-face tutorial classes with their tutors. Therefore, we believe that additional support academic materials for certain subjects are essential to develop learners' interest and understanding. Without any hesitation, *TEST* embarks on a test on the performance of the learners with the aid of *e-conomics* supplements. The *e-conomics* supplements are uploaded in the forum for the selected learners in two learning centers to access and download. Other than that, as an additional step, an e-mail is send out to all the selected-learnrns' tutors involved in this course for the semester to inform and remind them of such supplements to their learners in two learning centers in Malaysia.

e-conomics supplements consists of additional short important notes for each topic in the course with examples and charts used for explanation and illustration purposes. Besides that, it includes also step-by-step problem solving for calculation for the course and exercises with answers for learners to practice and try out are inserted as well. Problem solving which includes calculation is essential for this course as topics such as calculation of Gross Domestic Product (GDP), unemployment, inflation, exchange rates etc are crucial for this course. This paper investigates whether the *e-conomics* supplements is playing a significant role in enhancing teaching and learning activities, instill interest, motivation and confidence to learn the course; and improve overall performance of learners in the course.

Literature

According to Shaw & Polovina (1999), as compared to the conventional face-to-face educational experiences, open and distance learners feel lonely and isolated in learning due to the limited contact with the instructors and fellow course mates. Regardless of the significance of additional support in the eye of the public, any forms of support would be a blessing to the learners.

Lifelong learning has come to involve a variety of learning experiences or modes (Knapper, 1998; Knapper and Cropley, 2000). These modes include formal university campus teaching, workplace open learning, modular flexible learning programme, correspondence-based distance learning courses etc. Flexible, open and distance learning are educational approaches that are designed to be adaptable to the needs of a variety of learners. Some authors draw a distinction between flexible and open learning. Cooper (1996), for example takes flexible learning to include, modularisation and accreditation of prior learning. By contrast, open learning then relates specifically to the characteristics of allowing the learner to determine the time, location, and pace of learning. However, there are authors regard that both flexible and open learning is the same approach, just a matter of different names (Rowntree, 1991) and Race (1994). It is because distance learning is usually understood to involve open learning applied to situations in which there is a geographical separation between the learners and the learning institutions.

Based on Keegan, 1990; 1996, generally speaking, distance education can be understood in terms of the following five dimensions:

1. separation f teacher and learners;
2. use of media;
3. provision of two-way communication;
4. influence of an educational system; and
5. an industrial base operation.

Among the theories of independence and autonomy, those by Charles Wedemeyer and Michael Moore are well known. Believing that distance education is essentially a kind of independent study, Wedemeyer proposed a system with ten characteristics highlighting learner independence and the means of achieving it. His theoretical framework also describes the characteristics and teaching-learning situation in an independent study system (Simonson et al, 2000). Holmberg (1989), widely regarded as a seminal author in the field of distance and open education, also stresses “support” for students as being an important factor in successful learning. He focuses on the idea of the “emotional involvement” of the students in their study and the necessity for students to feel a rapport with both their teachers and the providing institution (Holmberg, 1989, p.162).

Online teaching is redefining faculty members’ schedules, as well as their duties and relationships with students by requiring more pre-course planning, distribution of time online over the course implementation, and virtual connectedness with students on a daily basis (Young, 2002). The utilisation of emerging technologies in distance education led to the American theory of equivalency, which seeks to make equivalent the learning experiences of all students no matter how they are linked to the resources or instruction they require (Simonson et al., 2000). According to this theory, distance education providers have the responsibility to design instructions that provide learners with equal learning experiences and values.

According to Desmond Keegan’s theoretical framework for distance education focuses on the concept of reintegration of teaching acts. To Keegan, education requires intersubjectivity, and it is crucial to recreate artificially this shares experience between teacher and student by making learning materials as dialogical as possible and by utilising different communication techniques (Simonson et al., 2000). However, not all of the research studying student performance found positive results for online students compared with their classroom counterparts. Professors at Michigan State University found that students who completed an economics course online did not fare well as students who completed a campus-based course (Brown and Liedholm, 2002).

The study focused on 89 students in two online course sections and 363 students enrolled in two traditional classroom courses. Interestingly, the researchers found that women’s performance was not diminished by the online environment as much as the men’s, even though women traditionally did not perform as well in economics courses as men. In additional, the study discovered that students in online courses did not spend as much time studying as traditional campus-based students.

However, this particular study was not without criticism for reaching unwarranted conclusions, ignoring individual differences, and not distinguishing enough difference in the final level of student learning (Wertheim, 2002).

Methodology

This study is conducted in the September 2008 and January 2009 semester with a total of 60 learners from two OUM learning centres who participated in the study, received the *e-conomics* supplements periodically throughout the course. At the end of the course, data was gathered from the participants using an 18-item questionnaire. The performances of the participants were then compared to the overall student performance for the course. This study aims to determine the effectiveness of *e-conomics* supplements in:

- enhancing teaching and learning activities
- instill interest, motivation and confidence to learn the course; and
- improve overall performance of learners in the course.

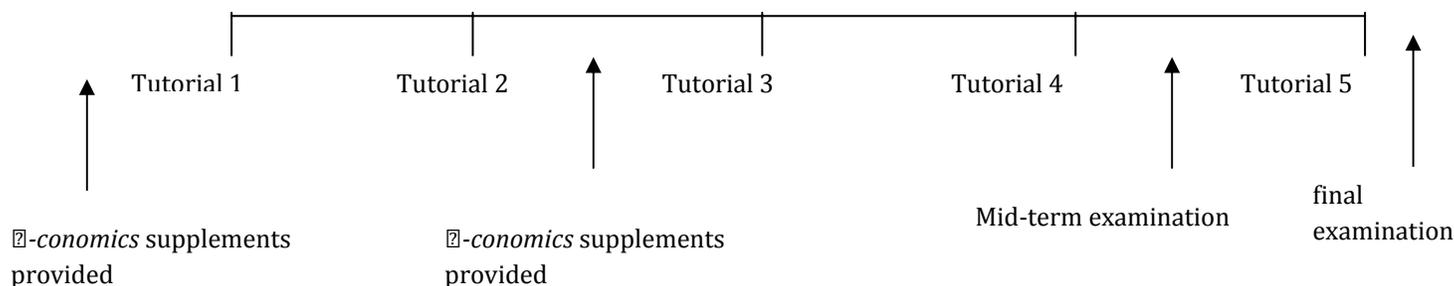
The *e-conomics* supplements are uploaded in the forum for the selected learners in two learning centers to access and download. Other than that, as an additional step, an e-mail is send out to all the selected-learners' tutors involved in this course for the semester to inform and remind them of such supplements to their learners in two learning centers in Malaysia. The selected learning centers are divided into two categories; Klang Valley and outside Klang Valley. The learning centers we selected within Klang Valley is Bangi learning center and regional learning center in Negeri Sembilan is selected for outside Klang Valley. These two centers are selected because of its large number of learners registered for this course.

However, there are limitations for this study:

- Number of learning center are restricted in the research;
- Selected-learners' eagerness and motivation to continuous on self-managed learning differ at different time of the semester; and
- It is carried out for Principles of Macroeconomics course only.

Other than that, it is hoped that the idea would inspire other research to explore the possibility of producing a truly valid, reliable and fair system of evaluation for assessing teaching. The sample in this study consisted of 60 undergraduate students selected, distance courses with OUM for September 2008 and January 2009 semester. The *e-conomics* supplements will be prepared for this study. It comprises of two sections for selected quantitative chapter for this course. There are step by step guide on solving a question provided and an exercise question with answer, however, without step-by-step workings. Firstly, the activity notes will be distributed before quiz and then it will be distributed after the quiz in order to test the student's performance of the two approaches.

The first phase of the *e-conomics* supplements are given before the tutorial 1 of the semester commence. Learners are guided and the activity book exercises are encouraged to be discussed in tutorial 1 and 2 in order to have better preparation to face the mid-term examination, which will cover Topic 1 and Topic 2. Second phase of the *e-conomics* supplements will be given to the learners after tutorial 2 and it will covers from Topic 3-Topic 8. This is the coverage for the final examination for this course. Below is the timeline line-chart for this study:



Analysis and Discussions

After the 60 respondents' data are collected, analysis is conducted using SPSS software. Descriptive and statistical on the respondents demographic are analysed according to gender, ethnic, age and learning centre. The detailed statistical data can be obtained in Table (i), Table (ii), Table (iii) and Table (iv).

Table 1 (i)

Gender	Frequency	Percent
Male	23	38.3
Female	37	61.7
Total	60	100

Table 1 (ii)

Ethnic	Frequency	Percent
Malay	43	71.7
Chinese	6	10
Indian	8	13.3
Others	3	5
Total	60	100

Table 1(iii)

Age	Frequency	Percent
<30	15	25
30-40	13	21.7
41-50	28	46.7
>50	4	6.7
Total	60	100

Table 1(iv)

Learning Centres	Frequency	Percent
Klang Valley	15	25
Outside Klang Valley	45	75
Total	60	100

Based on the tabulated table above, note that most of the respondents are female with 61.7%, ethnic Malay race with 71.7%, group age of 41-50 with 46.7% and lastly from outside Klang Valley 75%. This is a brief statistical detail of the respondents for this study. It is taken from semester September 2008 and January 2009. Table 1(i), Table 1 (ii), Table 1 (iii) and Table 1 (iv), shows the frequency and percentage of each category of the respondents for this study.

Table 2 (i)

	Question 3
Question 4	0.814

Table 2 (ii)

	Question 4
Question 19	0.004

Table 2(iii)

	Question 1
Question 19	-0.041

Table 2(iv)

	Q1	Q2	Q3	Q4	Q5	Q6	Q8	Q9	Q10	Q12	Q16
Q19	-0.041	0.244	0.105	0.004	0.182	0.076	0.163	0.176	0.123	0.224	0.233

Table 2(i), 2 (ii), 2(iii) and Table 2 (iv), shows the correlations between questions in the questionnaire. Most of the questions have a positive relationship with each other. However, there is one negative relationship between Question 1 and Question 19 in the questionnaire with value -0.041. Table 2 (i),

shows a strong correlations between Question 3 and 4 in the questionnaire. *ẽ-conomics* supplements exercises have a strong relationship in saving time to do revision and improved learners understanding of the subject. *ẽ-conomics* supplements is able to project a strong relationship in helping learners in saving time and improved learners understanding in the subject. Meanwhile, the weakest positive relationship is shown in Question 4 and Question 19 in Table 2 (ii) with value of 0.004. Tutor used the *ẽ-conomics* supplements as reference in the class and it helps to improve learners understanding in the subject. Subsequently, there is a negative relationship between Question 1 and Question 19 where *ẽ-conomics* supplements helped learners to make sense out of the subject and tutors used the *ẽ-conomics* supplements as a reference in the class. Meanwhile, there are positive correlations between most of the questions among each other except for Question 19 in the questionnaire.

Question 19 (My tutor used *ẽ-conomics* supplements as a reference in the class, has relatively low correlation and not significant to the other questions in the questionnaire for most of the questions in the questionnaire because *ẽ-conomics* supplements is uploaded twice in the web at the edge of the semester. Based on the learners' responses, most tutors did not use the the *ẽ-conomics* supplements as reference in the tutorial which is believed that most tutors are unaware of the *ẽ-conomics* supplements materials being uploaded in the web. Other than that, tutors have inadequate time to discuss those questions in the tutorial. It is however hoped that the *ẽ-conomics* supplements will be able to improve and refine further to tap the gap in the *ẽ-conomics* supplements and final exam level of assessment. It is shown in Table 2(iv) as out of 20 questions, there are 11 questions that are not significantly correlated with Question 19.

Table 3(i)

	Performance
Question 1	0.462

Table 3(ii)

	Performance
Question 9	0.686

Table 3 (i) and 3(ii) above show that correlations between the learners' performance with the items in the questionnaires. The lowest value shows a positive correlation between 0.462 between the learners' performance and *ẽ-conomics* supplements helped learners make sense out of the subject. Next, Table 3(ii) indicated the highest correlation between the learners' performance with *ẽ-conomics* supplements stimulates learners' creativity for the subject. From the analysis carried out, we found out that, *ẽ-conomics* supplements did indeed have a positive impact on learners' performance. We believe that the right timing of uploading and better refined *ẽ-conomics* supplements would most likely be able to assist and helped learners' performance.

Recommendations and Conclusions

In the above study, the overall performance of the learners for this course is tested against the sample of the study raises the issue of external validity. Will the results be the same if it is tested again in another time? The answer is likely to be negative. There is a possibility of a slight variation in the results if the

research is to be conducted again by varying some variables such as the sample size, the targeted group. However, the results generated are valid and reliable as for the current restrictions and sample size.

As the reference to the above analysis, it can be seen that, the *e-conomics* supplements did able to pull-up and increase the overall performance of the final examination of the sample group (with the aid of *e-conomics* supplements). Other than the results generated also provide us the information that *e-conomics* supplements also enhance the teaching and learning process and able to instil the learners' interest for this course. Hereby, we would like to recommend the following to further enhance learning via blended pedagogy in OUM:

- Constant improvement and frequent update of the *e-conomics* supplements (such as examples, exercises etc);
- Exercises provided in the *e-conomics* supplements should be of the level of final examination that requires learners to equip with high-order of thinking;
- Staggered provision of additional supplements for other courses such as finance, accounts, mathematics etc.

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