EVALUATION OF OUM'S MODULE CONTENT: A PILOT STUDY

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Abstract

The module (print or digital) is the main resource used by OUM learners to guide their learning. Therefore, the quality of learning depends greatly on the quality of the module contents. This paper reports on a pilot project that was carried out to evaluate OUM modules for the purpose of improvements. A survey was conducted to gather feedbacks from the users of OUM's modules which include both learners and tutors. The survey questionnaire seeks to obtain information on the perceptions of the users on the quality of the modules from a number of perspectives. The open-ended questions of the questionnaire also seek to gather information on the different types of errors in the various modules that need to be corrected. Research findings indicate that OUM's modules are generally well accepted by the users. There are however several errors found in a number of modules. The study helps to identify modules that need to be enhanced. The study also reveals that there are differences in perceptions between the tutors and the learners in certain aspects Some pertinent differences are about the difficulty level of the modules, language used and learning outcomes.

Introduction

Open and distance learning (ODL) has become an important mode of learning in the digital age. It is perceived by many adult learners as an alternative choice to conventional education. It is particularly popular among adult learners who are unable to pursue their studies on a full time basis. This is probably due to the fact that ODL has a more flexible instructional and learning structure that frees learners from the constraints of time and place. In recent years, the rapid advancement of information and communication technologies has paved the way for educators to explore new patterns and innovations in ODL.

In Malaysia, Open University Malaysia (OUM) is well recognised as the pioneer in ODL education and leading promoter of lifelong learning. As one of the most rapidly growing ODL institutions in the region, OUM is proud of the sharp cumulative growth of its student population from 753 2001 to about 168,000 in 2014. OUM has so far produced a total of more than 57,000 graduates at both undergraduate and postgraduate levels. The swift increase in the number of students opting to learn in OUM's open and distance learning environment indicates the practicality and relevance of this form of learning. The large number of learners who have graduated from OUM is also a solid testimony of the feasibility of ODL for effective learning. Nevertheless, OUM is aware that to maintain its competitive advantage, the organisation has to constantly improve its learning materials and learning system and tools.

Learning at OUM

Despite the increasing popularity of ODL, some educators are still sceptical of the efficacy of virtual learning via ODL as compared to the conventional face-to-face instruction and learning. In view of this, since its debut a decade ago, OUM has been seeking ways and means to continuously improve the quality of ODL education it offers. OUM strives to make ODL an alternative model of learning which is even better than the traditional

classroom education. To accommodate the variety of preferred learning styles among OUM learners, OUM adopts a blended learning model which comprises three learning modes: self-managed learning with print modules, face-to-face (F2F) facilitation and online learning using the proprietary learning system, myVLE. To ensure adequate learning support, besides the print modules, materials such as the digital modules, CDs, web-based learning objects, i-lectures, i-radios, PowerPoint presentation slides and so on are provided to learners via myVLE. At this juncture, it needs to be highlighted of the three major modes of learning, self-managed learning using the print or digital modules constitutes more than 70% of the learning time. As such, the quality of the print modules or the digital modules is the most important and vital learning material for the learners. It is thus very necessary for the university to identify the strengths and weaknesses of the modules for the purpose of enhancement.

Research Objectives and Research Questions

The main purpose of this research project was to carry out a thorough evaluation on the OUM modules to determine their efficacy as the main source of learning materials for learners. The research also seeks to identify modules that have weaknesses such as language errors and content errors for the purpose of enhancements. This is necessary in view of the large number of modules provided for all the various courses. Such research is to achieve the research purpose and objectives, the research adopted a two phase approach. The first phase was the evaluation of the web-based HTML modules by the research team members who are also educators, on the efficacy of the web-based HTML modules as a learning tool from theoretical perspectives. The second phase was conducted to gather information from both learners and tutors regarding the adequacies of the web-based HTML modules as an alternative to the print modules.

Besides the internal academic staff of OUM, the main users of the modules are the learners, and tutors. Therefore, they are the most appropriate groups to inform the faculties, instructional designers and learning system developers regarding the effectiveness of the modules.

The research study seeks to answer the following research questions:

1.   What are the types of error found in the module?

2.   What are the strengths and weaknesses of the module?

3.   What are the suggestions for improvement of the module?

4.   What is the overall rating of the module in terms of:

   –   Level difficulty;

   –   Clarity; and

   –   Suitability for learning the subject.

Background of the Problem

In OUM, module quality is one of the important aspects of quality services provided to students. Thus, it is imperative to produce flawless and quality modules so that we can engage them in effective learning. These will lead to be one of a major contributing factor to improving the retention and better engaging in lifelong learning. Whereas the high attrition rate has been an issue of concern at OUM. The use of print modules provides an alternative means to learn. Print modules present course content in a more organised and compressed form. Usually, besides the more focused course content, print modules include text-based assessment and practice activities in the form of short questions and discussion topics.

Literature Review

The distance learners mainly use self-instructional materials commonly known as "modules" supported by remote classes using video or audio-graphic, conferencing, multimedia materials such as audio cassettes, recorded video tapes, computer-based materials and slides, communication technologies such as tele-phone, telegram, facsimile and internet. Dick and Carey (1990) defined the module as a self-instructional printed unit of instruction that has an integrated theme, provides students with information needed to acquire and assess specific skills and knowledge, and serves as one unit of a total curriculum.

Printed self-learning material is the mainstay of the teaching-learning processes adopted by Open University Malaysia (OUM). Since its establishment in 2001, OUM has been promoting the use of specially prepared distance learning materials with built in instructional features. Over the years, it has almost developed a printed module house style, sometimes called format of self-learning material that included structure, objectives, introduction, subject matter in small chunks, self-check exercises (activities), summary, keywords, references and further readings.

However, very little is known about the actual use of these instructional design components of the self-learning materials. An analysis of periodical literature on distance education revealed that only 4.7% of the publications were related to design and development of learning materials (Mishra, 1997). Another review on priority areas in distance education research too indicated students' use of learning material as one of the important areas (Mishra, 1998). Mishra and Gaba (1999) research on the use of activities in self-learning materials by distance learners. Revealed that learners use activities heavily and depend on them (module) as a facilitator of learning. They use the open space, objectives, introduction, structure, etc. provided in the self-learning materials.

Methodology

This research is a survey research using a questionnaire with closed and open ended questions as an instrument. The questionnaire is divided into five parts. Part A consists of Module Information; Part B is on Respondent Information; Part C the Module Evaluation; Part D is about Comments and Suggestions and the last part is on content Errors Detected. The survey is distributed to tutors and learners.

Data Collection

The research was conducted in various OUM learning centres, there are from Kedah, Melaka and Bangi Learning Centre and were administered during September semester 2013. There are two different sets of questionnaire; 1) for Learners and 2) for Tutors. A set of 400 questionnaires were distributed to learners and 90 sets for tutors. Only completed sets were analysed of which there are 304 sets from learners and 74 sets from tutors. The survey forms were distributed to learners and tutors during the 2nd tutorial, the filled sets of questionnaires returned by the learners were collected on 3rd and 4th tutorial session.

The items of the questionnaire are shown in Figure 1.

PART	Items	Number of Items
STUDENTS COPY		
A: Module Information	▪ Module Title ▪ Module Code	2
B: Respondent Information	▪ Gender ▪ Age	2
C: Module Evaluation (This section is using a 5 point Likert scale [1 = Strongly Disagree, 2 = Disagree, 3 = Unsure, 4 = Agree and 5 = Strongly Agree])	▪ The module content is relevant to the subject. ▪ The content coverage is adequate for the subject. ▪ The module is useful to the learner in learning the subject. ▪ The information provided in the module is correct. ▪ The module content is presented in a clear and effective manner. ▪ The module is written at a level suitable for my understanding. ▪ The contents of the module are arranged in systematic and logical order. ▪ The language used in the module is appropriate for my understanding. ▪ Objectives or learning outcomes are clearly stated for each topic of the module. ▪ The topic content matches the objectives or learning outcomes provided. ▪ The exercises and learning activities given in the module are adequate. ▪ The exercises and learning activities given in the module help in my learning. ▪ The module is suitable for self directed learning (learning without guidance). ▪ Reading the module helps to improve my knowledge in the subject area.	12
D: Comments and Suggestions The purpose of the second item is to identify the problems encountered in using the print modules by gathering feedbacks from the learners. The second item "Please give suggestions on how we can improve the module" is for the purpose of collecting opinions from learners on how the modules could be improved	▪ Do you have difficulty in understanding the language and prefer the module to be written in Malay. (Please tick the appropriate box) _ YES _ NO ▪ What are your main problems in using the module? Problem 1: _____ Problem 2: _____ ▪ Please give suggestions on how we can improve the module: Suggestion 1: _____ Suggestion 2: _____	3
E: Content Errors Detected	▪ Provide information for the errors that you have found earlier by filling in the following table: <table><tr><td>Page number of the module</td><td>Paragraph No</td><td>Brief description of Error Found</td></tr></table>	1

TUTOR'S COPY		
A: Module Information	▪ The questionnaire is the same as a Student's Copy.	
B: Respondent Information		
C: Module Evaluation	▪ The module content is relevant for the subject.	18
	▪ The content coverage is adequate for the subject.	
	▪ The module is useful to the learner in learning the subject.	
	▪ The information provided in the module is correct.	
	▪ The module content is presented in a clear and effective manner.	
	▪ The module is written at a level suitable for my understanding.	
	▪ The contents of the module are arranged in systematic and logical order.	
	▪ The language use in the module is easy for my understanding.	
	▪ Objectives or learning outcomes are clearly stated for each topic of the module.	
	▪ The topic content matches the objectives or learning outcomes provided.	
	▪ The exercises and learning activities given in the module are useful.	
	▪ The exercises and learning activities given in the module help in my learning.	
	▪ The module is suitable for self-directed learning (learning without guidance).	
	▪ Reading the module helps to improve my knowledge in the subject area.	
	▪ The overall design of the module was attractive.	
	▪ The size/format (A4) of the module was appropriate.	
	▪ The references to the Web Sites were useful.	
	▪ The graphics and illustrations were effective in enhancing information.	
D: Module Content Specific Evaluation (This section is using a 5 point Likert scale [1 = Strongly Disagree, 2 = Disagree, 3 = Unsure, 4 = Agree and 5 = Strongly Agree])	▪ The module content is up to date with the contemporary knowledge and understanding of subject.	7
	▪ The module includes the key topics of the subject.	
	▪ The module topics are appropriately sequenced to facilitate smooth learning.	
	▪ The module strengthens students' understanding of knowledge and skills relevant to current practice.	
	▪ The module content promotes readers' deep thinking about the topics raised.	
	▪ The module content is up to date with the contemporary knowledge and understanding of subject.	
	▪ The module includes the key topics of the subject.	

Figure 1

Data Analyses

These data analyses aim to answer the research questions. Before the analyses are conducted, the internal consistency of items in the questionnaire was tested. Cronbach alpha was computed to measure the internal consistency. Cronbach's alpha is a measure of internal consistency, expressed as a number between 0 and 1. Internal consistency describes the extend to which all the items in a test measure the same concept or construct. A "high" value of alpha is often used as evidence that the items measure an underlying (or latent) construct. The results show that the Cronbach Alpha is 0.944 for the learners' feedback questionnaire and is 0.929 for a tutors' feedback questionnaire. This indicates that the instrument is highly reliable and therefore can be used for further analysis.

Errors in Modules

The research question 1 is, 'what are the types of error found in the module?' The results obtained can help us to identify modules that need to be enhanced. Modules selected for enhancements can be based on the following criteria:

(a)   Modules with many content errors;

(b)   Modules with many language errors; and

(c)   Modules with many spelling errors.

The result findings of types of error found in the modules are summarised in Table 1.

Table 1: Type of Error Found in the Module

		Mean	**SD**	**Mean**	**SD**	**t-value**
Content	68	3.06	2.40	3.86	2.21	2.74**
Language	68	2.95	2.38	3.55	2.15	2.10**
Spelling	68	2.91	2.34	3.68	2.26	2.60**

** significant at 0.05 level.

The evaluation of each above error is using a 10 point Likert scale as shown in Figure 2.

No Content / Language / Spelling Error   Full of Content Errors

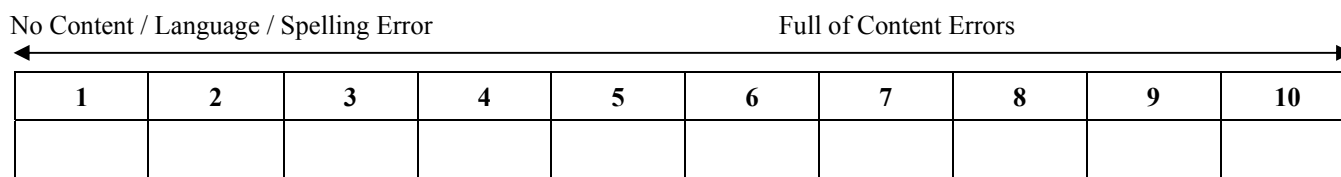| 1	2	3	4	5	6	7	8	9	10

Figure 2

From the table 1 it shows that irrespective of the types of error identified both learners and tutors the mean score is below 4, but tutors appear to rate higher on module errors as compared to the learners. The t-tests reveal that the rating scores of tutors are significantly different from that of learners. This is indicated by the t values which are greater than 1.96 which means that they are significant at 0.05 level. Better in experience, knowledge and subject matter of tutors may be reasons why tutors are able to identify more errors and therefore rate the errors higher than the learners who have less experience and lack of knowledge in the subject matter to identify the errors.

The results show that the modules are not error free, there are still rooms for improvement. As the respondents have identified the errors in some modules, OUM must be quick to verify whether the errors are genuine and corrections and enhancements must be done promptly so that the students will be able to obtain the right learning materials and hopefully this will help sustain the interests of learners, thus reduce the attrition rate among learners.

Weaknesses of Module Contents

Research question 2 investigates the weaknesses of the modules. There are two open ended questions in the questionnaire. The first question was aimed at collecting feedback / comments from the respondents regarding the problems they faced in the module. The second open-ended question was aimed at obtaining respondents' recommendations on ways to improve the modules. The feedback/comments and recommendations are summarised in Table 2.

Respondent	Comments	Suggestions
Learners	1. No coloured picture(s)	Add in more graphics and coloured picture (s)
	2. Text too lengthy	Text should in point form instead of paragraph form
	3. The used of high English language	Simplify the sentence(s) Need bilingual module
	4. Need example (s) of exam question in relation to the studied topic	Provide past year examination question in relation to the stated topic
	5. Less activities	Add in more activities, study case at the end of the topic (calculation module)
	6. Lack of explanation of the stated formula	Provide a brief explanation
	7. No answer for provided activities	Provide answer scheme
	8. Some topics are hardly to understand (confusing)	Refine the content
	9. The content of the module, not related to the assignment question	
Tutors	1. Redundant topics	Review the content (topic(s))
	2. Content not up to date (in relation to the issues / scenarios discussed	Updates the content
	3. Too many content, hardly to complete within four tutorials	
	4. The use of high language (English/Arabic)	Simplify the sentence(s)
	5. Less graphics	Add in more graphics and coloured pictures
	6. Too much content to be covered in one topic	Provide mind mapping for better understanding
	7. Bilingual modules are preferred	
	8. Less activities	Add in more activities
	9. Need more flowchart, diagram and etc rather than wording	
	10. The learners are working people, provide more real scenarios in their workplace environment	

From the above table, it is clear that the feedbacks/comments and recommendations from learners and tutors are almost similar. The comments of the respondents appear to focus on the appearance, language, learning activities and presentation of the module contents. This shows that OUM still need to put in more effort to improve the features of good modules to assist learners in their learning. Though the module content is generally sufficient to serve as self-learning materials, OUM needs to make improvements that have been specified.

Strengths and Quality of the Module

Research question 3 investigates the strengths and quality of the modules. There are 14 questions in the questionnaire. The respondents were asked to rank the different aspects of the module using a scale of 1 to 5. Where 1 = Strongly disagree, 2 = Disagree, 3 = Unsure, 4 = Agree and 5 = Strongly agree. Table 3 summarises the findings of the study.

Table 3: Module Evaluation by Learners and Tutors

	Tutor (n = 77) Mean	Student (n = 314) Mean	T Value
1. The module content is relevant for the subject	4.22	4.10	1.55
2. The content coverage is adequate for the subject	4.05	4.04	0.11
3. The module is useful to the learner in learning the subject	4.16	4.05	1.27
4. The information provided in the module is correct	4.08	4.03	0.59
5. The module content is presented in a clear and effective manner	4.01	4.00	0.11
6. The module is written at a level suitable for my understanding	4.20	4.00	2.32**
7. The contents of the module are arranged in systematic and logical manner	4.16	4.01	1.68*
8. The language used in the module is appropriate for my understanding	4.31	4.02	3.90**
9. The objectives or learning outcomes are clearly stated for each topic of the module	4.31	4.07	3.30**
10. The topic content matches the objectives or learning outcomes provided	4.20	4.05	1.73*
11. The exercises and learning activities given in the module are adequate	3.95	3.93	0.20
12. The exercises and learning activities given in the module help in my learning	3.96	3.98	-0.22
13. The module is suitable for self-directed learning without guidance	3.87	3.84	0.27
14. Reading the module helps to improve my knowledge in the subject area	4.05	4.11	-0.65

* Significant at 0.1 level
** Significant at 0.05 level

The findings reveal that the mean scores tutors range between 3.87 to 4.31 whereas the learners ranked the modules at a range of 3.84 to 4.11. These are fairly good mean scores which indicate that in general our modules are fairly good in quality and well accepted though there are rooms for improvement. Items ranked with a mean score above 4 by tutors included module content is relevant to the subject, they are written at a level suitable for them to understand, arrange in systematic and logical order, appropriate language is used, clear objective and outcomes for each topic and the content is in line with the learning outcomes. As for the learners, the mean score is fairly close to 4 for all items.

When the mean scores of tutors and learners on the various items were compared, some significant differences were observed. Based on the t tests conducted, the mean scores for learners and tutors related to the level suitable for their understanding, language used and learning outcomes, there are significantly different at 0.05 level.

Based on the findings, it is evident that certain areas of module need further improvements, especially on items that obtained lower scores. For example the modules should include more exercises and learning activities to help learning.

Conclusion

The research project was carried out to evaluate the quality of the module content which is a necessary step that can contribute to quality improvement of OUM's learning materials. Though the module contents are well received by the users, there are still rooms for improvement. The research findings could serve as an input and guide for the instructional designers and the academics of OUM to further improve the module contents so as to make it more interesting, attractive, interactive, user-friendly and most important of all, provide an effective and useful self-managed learning materials to users. With this, it is hoped that the retention rate will increase and fulfil our aspiration to be the lead provider of lifelong learning.

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