Open University Malaysia Modules Satisfaction with Instructional Design Elements

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Abstract
Open University Malaysia (OUM) is an open and distance learning (ODL) institution; adopting the hybrid learning pedagogy. It provides a flexible, learner friendly, and accessible approach to online learning to ensure that learners can study from anywhere, and at any time. Learners engage in self-learning most of the time. As a pioneer of ODL education, OUM responds to quality learning materials by leveraging Internet-based technology in order to support the learning process in an ODL setting. Main objectives: This study aims to obtain (i) students' perceptions and actual usage of learning materials, learning modules in particular, and (ii) the importance of instructional design in learning materials satisfaction. Through this study, OUM will be able to obtain feedback from learners of the instructional design elements implemented in the modules. Methodologies: The basic design of data for this research paper was gathered from exploratory and survey questionnaires. The questionnaires were distributed to the learners via Google Forms in OUM's learning management system (LMS) known as myINSPIRE. Feedback from learners in various programmes and learning centres were collected via online surveys for three semesters in the year 2019 (January, May, and September). Results: The findings show that from 969 learners for the January, May, and September 2019 semesters, OUM learners are very satisfied with their modules. The results of this study would be able to provide some insights to OUM on the quality of learning modules from the instructional design perspective. The study certainly benefits the university in taking action to improve the quality of modules focused on instructional design elements. Recommendation: Currently, the survey is focusing only on modules. In the future, we aim to conduct a more extensive survey to measure the learners' satisfaction with our other learning materials, namely, interactive web-based materials and video lectures.
Keywords: Open and Distance Learning, Learning Materials, Modules, Engagement, Instructional Design, Feedback, Quality

Introduction
From year end 2019 to 2021 the world went through tough times with the coronavirus disease 2019 (COVID-19) pandemic. Inevitably, there have been severe impacts on education systems around the globe. Schools and universities were closed, and millions of children, adolescents

and young adults have been out of schools and universities. Most institutions of higher learning had to change their strategy from conventional face-to-face (f2f) teaching to remote teaching; using on-hand technologies familiar to them, such as learning management systems, extended web conferencing meetings, emails, and even phone calls (Xi et al., 2021). As such, many teaching and learning approaches were implemented in many cases as an alternative of teaching delivery. With the abrupt shift and uptake of online learning, due to the COVID-19, the teaching and learning – technology based giving a great impact at all students' level, i.e. pre-school, primary, tertiary, and higher learning.

As an open and distance learning (ODL) education provider, Open University Malaysia (OUM) is implementing hybrid learning throughout all courses. Hence, OUM has invested in a number of e-learning and digital learning materials for learners to use and be engaged in their learning. These include modules, study guides, video lectures, e-lessons, learning kits, etc.

However, the emergence of digital technologies and widespread access to online learning materials brought different challenges in teaching and learning. Sampson et al. (2010) stated that students' satisfaction and results are good markers for assessing the quality and effectiveness of their learning. Institutions are interested to know whether their students, in general, are satisfied with their learning experience (Kember & Ginns, 2012).

Research Objectives and Research Questions

As mentioned earlier, OUM has invested in a number of e-learning and digital learning materials for learners to use and to engage with their lecturers and tutors for effective learning. These include a learning management system (LMS), known as myINSPIRE, online modules, video lectures, e-lessons, learning kits, HTML5 Package (H5P), and others. With so much priority and significance placed on e-learning technology and digital learning materials, it is essential for the university to monitor how learners are accepting and using them in their studies.

This study examined learners' experiences in using these e-learning technology and digital learning materials at OUM. The objectives of this research are to obtain:

(i)   Students' perceptions and actual usage of learning materials and technology; and

(ii)   The importance of instructional design in learning materials satisfaction.

The research study seeks useful insights and guidelines in the formulation of quality learning materials.

Learning in OUM

OUM has started investing in a number of e-learning and digital learning materials for learners to use and to engage with their lecturers for effective learning since 2001. These include the previous learning management system (LMS), known as myVLE, CD-ROMs with multimedia content, Hypertext Markup Language (HTML) modules, i-Lectures, and i-Radio learning segments (Abdullah, 2001; Latifah & Ramli, 2003; Latifah et al., 2006). With so much priority and significance placed on e-learning technology and digital learning materials, OUM has moved forward maximising the use of technology in their teaching and learning. Thus, it is essential for the university to monitor how learners are accepting and using them in their studies.

The emergence of digital technologies and the widespread access to open educational resources brought many different challenges in higher education. In OUM, all courses are delivered in a hybrid method: self-managed learning and online learning.

Literature Review

The quality of learning materials is of prime concern to ODL learners in Malaysia. In a survey conducted among post-graduate learners at OUM back in 2015, "good quality modules or study guides" was cited as one out of five items that was important to the learners (Latifah et al., 2015). The survey concluded that if the course contents, among others, are positively addressed, the learners are likely to continue studying at OUM and attain their educational goals. In another study conducted by Widad and Shawira (2016) on perceptions of in-service teachers on OUM as an ODL provider revealed that having an enriched learning experience that allows them to perform better was one of the services that they perceived as satisfying.

One of the tools to ensure the quality of modules is by having the necessary feedback in place. Feedback provides the learners level of satisfaction with the learning materials. Learner's satisfaction is a critical measure of the learners' overall academic experiences and success (Virtanen et al., 2017). There are different instruments to measure their satisfaction in an online environment. Using survey questionnaires is generally standard practice for measuring learner satisfaction.

Feedback serves many functions. Among others, feedback "identifies what are the barriers or gaps that can be further addressed" as well as enhances learner's engagement in the relevant programme (De Bie & Brown, 2017). The items in the module feedback questionnaire should ideally relate to areas of concern to ODL learners, namely readability, ease of understanding, assessment, and how helpful the module is to the learners.

A learning gap can be defined as "the difference between what a student has learned—i.e., the academic progress he or she has made—and what the student was expected to learn at a certain point in his or her education, such as a particular age or grade level" (Great Schools Partnership, 2021). Identifying the gaps of knowledge among students and then providing them remedial recommendations of learning materials were discovered to be both relevant and helpful to most students (Konstantin & Alexander, 2018).

An engaging module can help students to close the learning gap. Engagement, a main component of active learning, involves among others "the processing and integrating of relevant information and dialogue between students" and this is done either in a structured or unstructured context (Shroff et al., 2021). Studies by Chi and Wylie (2014), indicate that students show a deeper desire and motivation to learn; and are more cognitively engaged as they move from *passive* to *active*, and later to *constructive*, culminating to *interactive* engagement. This is where instructional designers play a critical role, which is to identify appropriate learning materials/activities and assessment tools (Beirne & Romanoski, 2018), thereby making the modules more engaging to the students.

As such, a pilot study was conducted in 2014 to evaluate the quality of OUM's module content and the result showed that even if the modules were well accepted by the learners, improvements could be made by adding more activities and exercises (Shawira et al., 2014). The following year, a study concluded that most of the modules were written at levels that their intended learners; however, readability alone was not a significant influencer of their academic performance (Weng et al., 2015). Indeed, there are other factors that can bring positive effects to students such as student engagement and the development of student team working skills (Willmot & Perkin, 2011). Meanwhile, Sutherland et al (2019) identified other factors that can influence student satisfaction with module quality such as the degree to which a module integrates well with other elements of the course; the usefulness of supporting online materials; and the appropriateness of summative assignments.

Module satisfaction also depends on the type of module. For instance, there is a positive relationship between the quality of translated modules and the translators' qualification (Nooni et al., 2019). Having various quality assurance mechanisms in place during the module development process also plays a role in producing quality modules (Nazrai et al., 2017).

Methodology
This research uses the methodology of questionnaires using Google Forms as an online survey given to OUM learners after they have completed the semester courses. This survey can be accessed through OUM's learning management system known as myINSPIRE. End-of-module feedback is obtained routinely for all modules via an online survey for learners.

The survey, among others, contains 11 items with a mix of rating questions and open-ended questions. Nine of the items are specific statements for learners to rate on a 5-point of Likert scale, where eight included a scale with 5 indicating "strongly agree" and 1 "strongly disagree". The final rating scale is on the overall rating scale of the module, with a 5 indicating "outstanding" and at the opposing end 1 indicating "poor".

Out of these nine items, six are directly related to instructional design and learning effectiveness as listed below:
● Statement 3 – The learning outcome, contents, Self-check and Activity questions were well aligned to enhance understanding.
● Statement 4 – There were sufficient numbers of Self-check and Activity questions in the module.
● Statement 5 – The Self-check and Activity questions were helpful.
● Statement 6 – The content was systematically organised to facilitate my learning (from easy to difficult, concrete to abstract).
● Statement 7 – The module was easy to read.
● Statement 8 – The graphics and illustrations were effective in enhancing learning.

The other three items are as the following:
● Statement 1 – The overall design of the module was attractive.
● Statement 2 – The formatting of the module was well laid out.
● Statement 9 – My overall satisfaction rating of this module is:

These items are the same for the 2019 semesters (January, May, and September). This study is limited in that it only covers the module evaluation survey for 2019, namely the three semesters at OUM: January, May, and September as shown in Table 1 with a total of 969 respondents.

Table 1
Respondents for the 2019 Survey by Semester

Semester	January	May	September	Total
Respondents	110	647	212	**969**

Findings

Figure 1 shows an example of the layout of a module. Questionnaires are based on such modules, which have been filled in by learners of OUM for the three mentioned semesters in 2019.
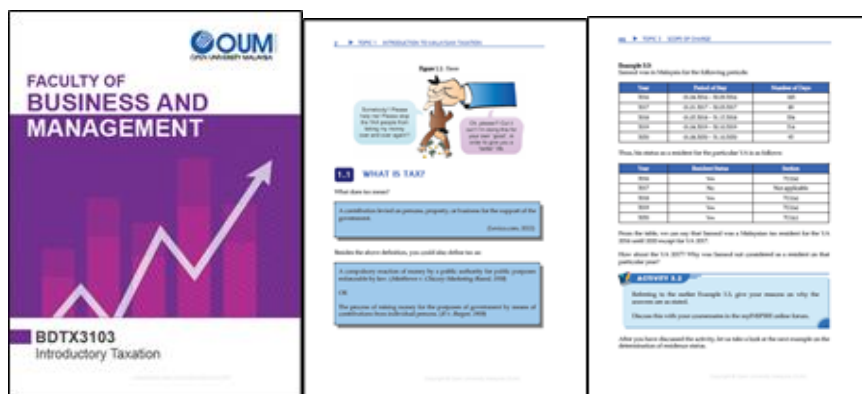

Figure 1. Example of the layout of a module

Table 2 shows the result of each item asked to learners by the average rating based on the Likert scale from 1 (strongly disagree) to 5 (strongly agree). There were increasing ratings given to learners of OUM.

Table 2

Average Ratings of the Instructional Design (ID) Elements
(Covered by Questions 3 to 8) in the Module in 2019 Semesters

Semester / Question	January		May		September	
	Average	Percentage (%)	Average	Percentage (%)	Average	Percentage (%)
3	4.03	80.55	4.21	84.11	4.16	83.21
4	3.91	78.18	4.09	81.76	4.16	83.21
5	3.95	78.91	4.19	83.83	4.10	82.08
6	3.97	79.45	4.17	83.31	4.17	83.30
7	3.96	79.27	4.14	82.84	4.14	82.74
8	3.93	78.55	4.13	82.69	4.18	83.68

Figure 2 shows the comparison of average ratings by semester in 2019. The charts clearly indicate that overall, the average ratings for May 2019 and September 2019 semesters were above the score of 4 or "Agree".

Comparison of Average Ratings by Semester (%)

■ Jan-19 ■ May-19 ■ Sep-19

Q3: The learning outcomes, assessment tasks and learning activities in each topic were well aligned
 to enhance understanding.
Q4. There were sufficient numbers of self-check and activity questions in the module.
Q5: The learning activities (including self-check and activity questions) were helpful.
Q6: The content was systematically organised to facilitate my learning (from easy to difficult,
 concrete to abstract).
Q7: The module was easy to read.
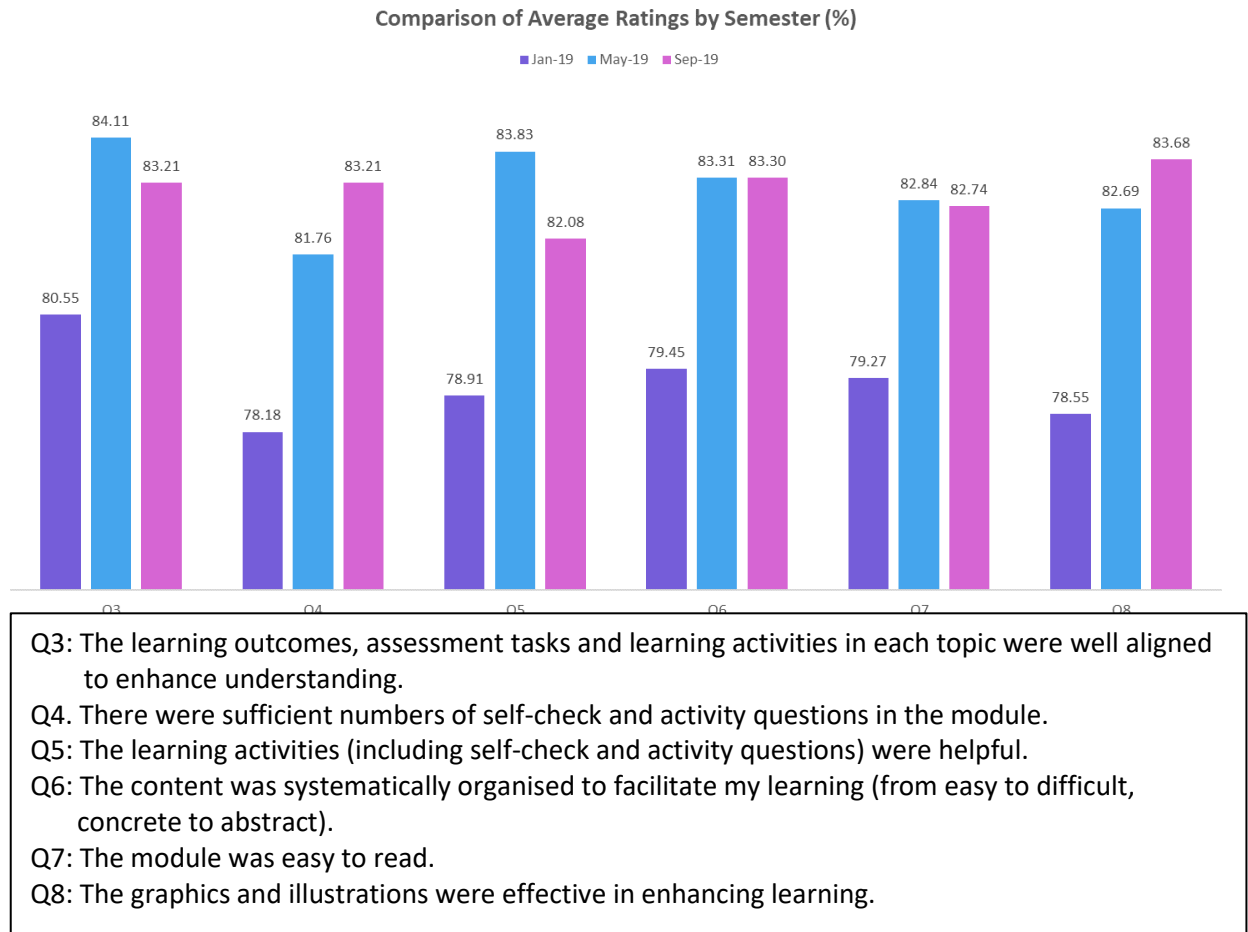Q8: The graphics and illustrations were effective in enhancing learning.

Figure 2. Comparison of average ratings by semester of 2019

Finally, Figure 3 shows the comparison of average ratings of the learners' overall satisfaction with the modules based on the Likert scale from 1 (poor) to 5 (outstanding). Learners generally gave a score of 4 or "Good", for all semesters throughout the year, indicating that they were satisfied with the modules.
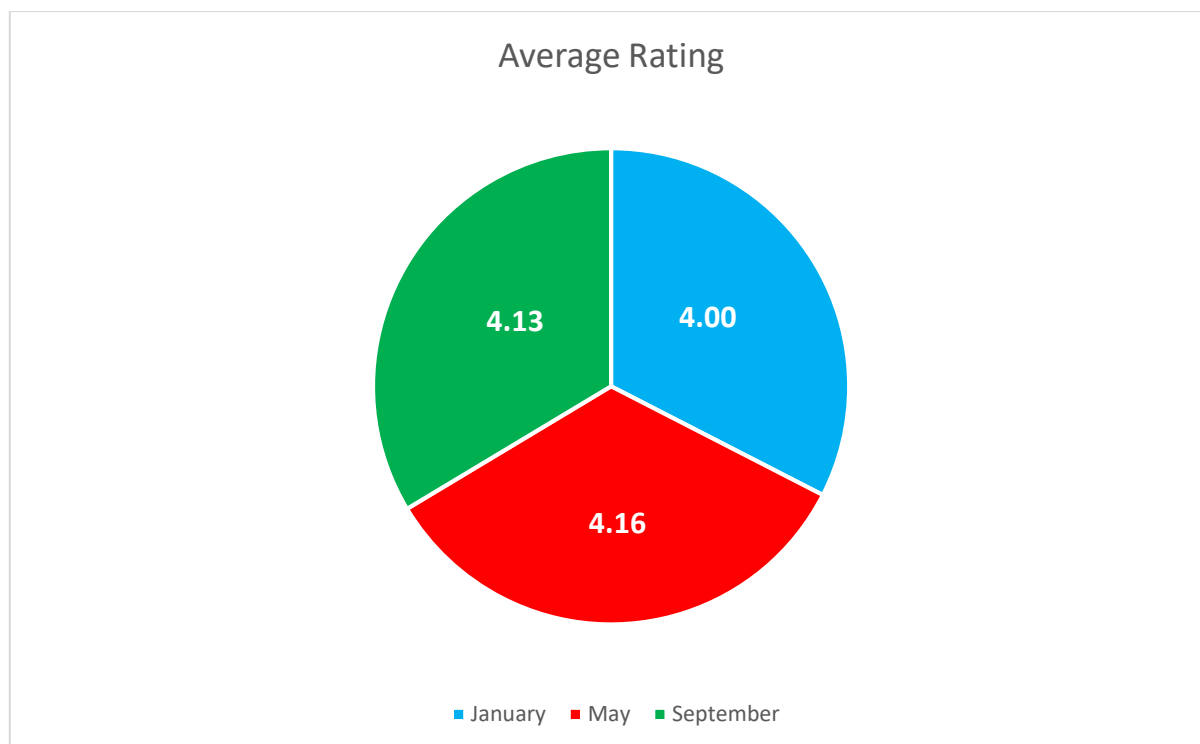
Figure 3. Comparison of average ratings of overall learners' satisfaction with the modules for 2019

Conclusion

Based on the findings from 969 learners for the January, May, and September 2019 semesters, it can be concluded that OUM learners are very satisfied with their modules. In fact, Figure 1 shows there seems to be a slight increase in learner satisfaction during the May and September semesters of 2019. From the modules, the learners have successfully gained knowledge from the fine layout of figures, tables, and content. The instructional design elements, which were incorporated in the modules, have helped learners to understand the content effectively. Besides, all the processes involved in producing modules have helped the learners to study better. This study however is limited only for modules as one of our learning materials developed by the Centre for Instructional Design and Technology at OUM.

This finding is useful to the improvement of online education and adult learners pertaining to the importance of instructional designers in module development. Indeed, modules are different from textbooks as they are incorporated with instructional design elements, tailored to the specified curriculum of subjects, and are more concise. ODL universities can benefit from this exploratory and survey study by having some useful insights from OUM's experience in module development and the role of instructional designers in making engaging modules for the learners. The instructional design elements, which were incorporated in the modules, have helped them to understand the content effectively and to study better during their free time.

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