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Research Article

Development, Validation and Effectiveness of Instructor- made Learning Course Material (LCM)

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ABSTRACT

The study sought to develop and validate a learning course material and to determine its effectiveness of the instructor- made learning course material. Developmental educational research approach was utilized in attaining the research objectives. Specifically, focus group discussion protocol, adapted standardized validation instrument and instructors- made learning task was used in the development, validation and test of effectiveness of the instructor made learning course material. The study revealed that the developed learning course material is accurate, coherent, appropriate and useful, hence, considered valid based on the evaluation of subject matter experts. In addition, the learning course material is effective based on the results of the pre and posttest of the student takers.

Keywords: Curriculum, Development, Effectiveness, Instructional material, Validation

Introduction

Background

In the fast- pacing change in the national and global educational system, the government and the academic institutions are challenged in adopting to the shift that may influence the learning and performance of its students relative to the Volatile, Uncertain, Complex and Ambiguous (VUCA) world, thus focusing on the learners' competencies. It is noticeable that shift in the educational system is one of the issues that educational institution and practitioners should address brought by globalization and technological advancement, hence,

educational reform should be done aligned to the practical needs of educational system around the globe (Zhao, 2015). One of the goals of the 21st century education is to promote global education to local communities, adapting to change based on the societal needs (Care et al., 2018). In addition, responsive and effective education reform should consider in the adaptation of academic agencies and institutions. Quality education, as one of the Sustainable Development Goals (SDGs), emphasized its contribution in promoting development of the country and of the globe (United Nations [UN], 2015).

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In Nigeria, the curriculum of their education system is obviously misaligned in the facets of changing needs of the society and is focus on their contemporary educational culture, hence, Alade (2011), recommended a value- re-orientation on the educational paradigm of their country, redirection of contemporary education culture to practical approaches align in the needs of the global society. In addition, Gukas (2007) discussed that African medical education fails to established a responsive education that meets the changing needs of the society, resulted to poor global competencies of medical students. The author also mentioned that one reason behind this issue is global training that lacks to the faculty and administrators of medical schools in Africa.

In the Philippines, the government approves the implementation Enhanced Basic Education Act (2013) also known as the Kinder to Grade 12 basic education curriculum which aims to strengthen the basic education curriculum in the Philippines by supplementing 2 years basic education (senior high school). This law also aims to increase the competitive advantage of Philippine education institution in producing globally qualified professional that fits to the need of the labor market.

The implementation of the Enhanced Basic Education Act, also influences the Philippine Higher Education. In fact, the Commission on Higher Education (CHED) facilitates necessary measures to address the needs of SHS graduates that will enter in a Higher Education Institution (HEI), one of which is the issuance of policy in integration of General Education Courses (GEC) in the higher education curricula. The action made by the Commission in the integration of revised General Education (GE) is to align the domains of knowledge, skills and abilities to the expectations and readiness of Senior High School (SHS) graduates.

In this matter, curriculum plays vital role in the education sector around the globe. One of the top issues in the field of education, according by Mateo Diaz & Lim (2022), is the curriculum reformation. Moreover, the authors emphasized that the curriculum that is being used in an academic institution reflects the responsiveness and standard of education they provide to their students. More so, in crafting

the curriculum for educational programs, needs of the stakeholders should be incorporated to attain the high level of success, hence understanding changes and innovation environments are necessary (Law, 2022). Its significantly recommended that academicians should periodically revisit their curriculum and to realign in the global trends, specifically on the needs of the labor market. Lastly, another factor in determining the effectiveness and responsive of the program curriculum, according to Camuyong et al. (2022), is the graduate performance.

The abrupt shift in the educational system challenge HEIs to be adoptive and responsive to this change, thus, requiring the academic institutions to develop a Learning Course Material (LCM) that fits to the standard of the Commission and to the needs of the 21st century learners.

Choppin et al. (2022) stated that instructional material is a significant aspect of the curriculum that addresses the gap between learning and teaching among students and teachers. Instructional materials are a modality in delivering the competencies that students need to acquire as stipulated in the program curriculum. Consequently, instructional material alone does not secure the acquisition of student competencies stipulated in the program curriculum, hence, Tandika (2022) recommends training for educators in the utilization of instruction material to supplement the learning and competencies of the students.

Further, instructional materials have a significant role in addressing the performance of students. However, due to shortage of available instructional materials, teachers utilized various strategies to continue in delivering quality education among its students (Tety, 2016).

One of the general education courses that should be included in the program curriculum in the offerings of an HEI in the Philippines is "Understanding the Self". This subject focus on individual's identity as well as the different facets that contributes in its development. More so, this course focused on the exploration of the issues and concerns regarding self and identity. It also aimed to develop a more critical and reflective attitude while enabling them to

manage and improve their selves to attain a better quality of life (CHED, 2013).

Several studies conducted regarding instructional materials under the Philippine education system, however there is a limited researches regarding the development, validation and effectiveness of a General Education Course (GEC) offered in the Higher Education Institution that is aligned to the enhanced basic education curriculum and memorandum from the Commission of Higher Education about its offering, hence, the study was conducted.

Research Framework

Figure 1 describes the paradigm in developing, validating and testing the effectiveness of the Learning Course Material. Focused- Grouped Discussion (FGD) by Faculty Members teaching the GEC is part of the input (I) in developing the LCM. The developed LCM will be subjected to validation by subject matter experts and testing of effectiveness through learning tasks of the selected students includes the process (P) which will serve as the basis for revisions and improvements. Lastly, the output (O) of the study is the validated and effective LCM in GEC.

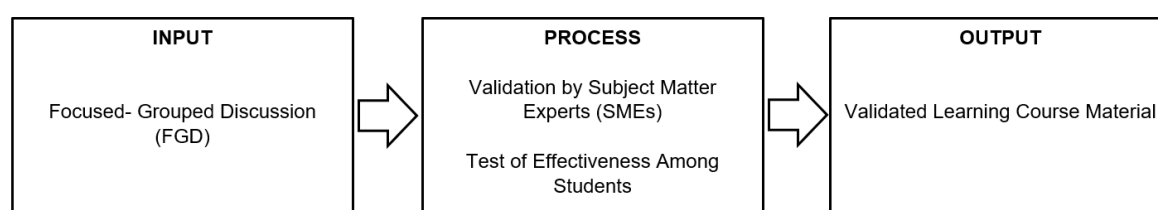


Figure 1 Paradigm of the Study

Research Objectives

The purpose of the study was to develop a Learning Course Material aligned to the CHED Memorandum Order and other related references. Furthermore, it also aimed to determine the validity and effectiveness of the developed LCM in “Understanding the Self” as basis for its improvement and utilization in the curricular programs of the university.

Methods

Design

The study utilized developmental educational research approach in developing, validating and testing of effective of the instructor-made Learning Course Material (LCM) in “Understanding the Self” of a state university in Central Luzon, Philippines. According to Seels and Richey (1994), as cited by Sulatra (2022), developmental educational research served as systematic method in the creation and improvement of instruction- related programs that which is effective and undergone psychometric evaluations.

Participants and Setting

Participants in this study were subdivided into three groups; Faculty Members, who are

teaching the course “Understanding the Self” who served as members of the Focus- Group Discussion, which is the platform in developing the LCM. Faculty members who are expert in the chosen field and are also developing instructional materials are classified as module developers, (Baloran & Hernan, 2020). Five (5) prominent academicians who were Subject Matter Experts (SME) in the chosen field and in the development of instructional materials served as validator of the LCM. Lastly, 23 students who were enrolled in the course, which were chosen through convenience sampling, took the learning tasks of the LCM to measure its effectiveness.

Research Instrument

Development Instrument - Faculty members teaching the GEC had a Focused- Group Discussion (FGD) protocol to determine the key areas to be incorporated in the development of the LCM. Checking of various references and textbooks relative to GEC was done as basis for integration of topics to the LCM by the FGD. Moreover, faculty members also aligned the proposed topics of the LCM to the CHED Memorandum Order (CMO) No. 20 series of 2013.

Validation Instrument- In determining the validity of the developed LCM, the study adapted the standardized four-point Likert scale evaluation tool for instructional materials utilized by Rogayan and Dollete (2019), which composed of the following criteria; adequacy, coherence, appropriateness and usefulness.

Effectiveness Instrument- Instructor-made learning evaluation based in the developed LCM was utilized in measuring the effectiveness of the LCM among the students taking the course.

Data Collection

Faculty members who are teaching the GE Course held FGD protocol in order to determine the key areas and topics that were incorporated in the proposed LCM. Furthermore, the faculty members also considered the course description stipulated in CMO 20. S. 2013 and other references and textbooks to determine

the topics that will be incorporated in the proposed the LCM. In addition, FGDs, as data collecting strategy, according McLafferty (2004), can obtain relevant information about the issues/ topics that are being discussed and can be done with a small number of people.

Moreover, the researcher invited Subject Matter Experts (SMEs) in the field and instructional material development to determine the level validity of the LCM based on the standardized instructional material evaluation instrument adapted in the study of Rogayan and Dollete (2019).

Lastly, in identifying effectiveness of the developed LCM, 23 students, which were chosen through convenience sampling, were invited to take the instructors-made learning task, prior and after utilizing the LCM. Student performance in the instructors- made test served as the basis of the determinants of its effectiveness.

Results and Discussion

Table 1. Topics Incorporated in the Developed Instructor- made Learning Course Material

Chapters	Title
Chapter 1	A Philosophical Journey to Discovering the Self
Chapter 2	Sociological and Anthropological Perspective
Chapter 3	Psychological Perspective and the Self in the Western and Eastern/ Oriental Thought
Chapter 4	The Physical Self
Chapter 5	The Sexual Self
Chapter 6	The Material Self
Chapter 7	The Spiritual Self
Chapter 8	The Political Self
Chapter 9	The Digital Self
Chapter 10	Learning to be a Better Student
Chapter 11	Setting Goals for Success
Chapter 12	Taking Charge of One's Health

Table 1 reflected the topics that was incorporated in the developed LCM based on the Focused Group Discussion (FGD) protocol participated by faculty members (developers) who taught the course "Understanding the Self", wherein, analysis of SMEs perceived learners' need was done as part of the protocol. Furthermore, these topics was anchored in the course

description given by CHED and on the other reference materials. The incorporated topics in the LCM addresses the 21st century learner need in the formulation of self and identity. More so, cognitive, social, biological and environmental factors that is significant in the personality and construing oneself was also included (CHED, 2013).

Table 2. Content Validity of the Learning Course Material

Criteria	Mean	Remark
Adequacy	3.48	High
Coherence	3.28	High
Appropriateness	3.04	High
Usefulness	3.36	High
OWM	3.29	High

Legend: Very High (3.50- 4.00); High (2.50- 3.49); Low (1.50- 2.49); Very Low (1.00- 1.49)

Table 2 reflected the summary of content validation of LCM by Subject Matter Experts (SMEs) in the chosen field and in IM development. Based on the results, SMEs evaluated the LCM as adequate (M= 3.48), coherent (M= 3.28), appropriate (M= 3.04) and useful (M= 3.36). In general, the developed LCM is valid (OWM= 3.29).

In addition, despite of positive perception about the instructional material, their learning adequacy may be insufficient (Ozdamli & Uzunboylu, 2015). Coherence of the instructional

material in the education curriculum is significant in determining its validity and effectiveness (Wood & Hedges, 2016). According to Slavin (1994) using QAIT model, appropriateness of instructional material is beneficial to the diverse population of learners as well as to their learning styles. According to Ajoke (2017), usefulness of the learning course material, is not just based on its technical construction but also on the learning performance of students.

Table 3. Effectiveness of the Learning Course Material

	PRE-TEST		POST-TEST	
	Mean	SD	Mean	SD
Chapter 1	5.27	1.032	10.32	2.255
Chapter 2	4.59	1.260	7.55	1.262
Chapter 3	7.55	1.262	11.55	2.110
Chapter 4	5.86	1.356	9.73	1.723
Chapter 5	5.91	1.444	12.50	3.098
Chapter 6	5.00	1.195	10.27	2.142
Chapter 7	4.77	1.193	8.55	1.683
Chapter 8	4.77	1.110	10.50	2.241
Chapter 9	6.68	1.756	14.41	3.034
Chapter 10	6.91	2.245	18.50	3.113
Chapter 11	5.50	1.225	10.59	1.943
Chapter 12	5.50	1.225	10.59	1.943
Overall Weighted Mean	5.94	1.917	11.99	3.764

Table 3 presented the test performance of the student takers before and after reading the LCM. Comparison in performance of students before and after reading the developed LCM serve as the basis of its effectiveness. Hence, based on the result of the pre- test and posttest of student takers, the developed instructor-made LCM is effective. Further, incorporation

of other component in LCM, such as a comic strips and other visual graphics, can help improve understanding of the learners (Casumpang & Enteria, 2019). In addition, Chen, Chen, & Tsai (2011) mentioned that effective learning course material could improve students' learning and understanding on the subject matter.

Conclusion and Recommendation

The study was conducted to develop, validated and determine the effectiveness of the instructor- made learning course material. The developed LCM is said to be accurate, coherent, appropriate and useful based on the evaluation of the subject matter experts. Further, it is also considered effective based on the results of the pre and posttest of the students who utilized the instructor- made LCM.

The developed learning course material is based on the FGD protocol of the faculty teaching the subject matter; hence, it is suggested to conduct similar studies that addresses the least learned of the students taking the course to focus on the learner's perceived needs.

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