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Self-instructional modules in general education 1 towards understanding the self

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Abstract

This developmental research aimed to produce Self-Instructional Modules (SIMs) in the course General Education 1 with the descriptive title, Understanding the Self. The development of the instructional material, which was done in the Second Semester of the Academic Year 2020-2021 adapted the Input-Process-Output-Outcome (IPOO) model of Brown to demonstrate the design-develop-evaluate phases of module making. The SIMs were designed to be used by the first-year college students of La Carlota City College. The design, development, and evaluation of the modules gathered insights from the reviews of the literature on module making. The developed SIMs were composed of nine parts, namely, the Title of the Module, Overview, Learning Objectives, Pretest, Learning Activities, Self-Learning Tasks, Posttest, References, and Key Answers. The instrument was administered to a team of six experts composed of the College Dean, Assistant Deans, Department Head, GE 1 Professor, and an IT expert. The instrument was composed of twenty-five items distributed to five parameters: objectives, contents, format and language, presentation and us, and usefulness. All these parameters were rated excellent by the evaluators, resulting in an overall rating of the SIMs at an excellent level. The evaluation result indicates that the SIMs possess the needed quality to be used for instruction.

Keywords: Learning Proficiency, Modular Instruction, Strategic Intervention Material, Higher Education Institution

1. Introduction

Self-understanding has evolved from an early need or drive theories toward an increasing interest in identifying the real meaning of "self". Self-understanding encompasses a principle of higher self as a source of intrinsic motivation that is less stressful, more natural and less forced that the conditioned states of motivation that are connected to self-concept. It requires a lot of self-engaging activities to fully uncover the real self. As human being, we crave to understand and to be understood.

The foregoing statements highlight "a journey to the self", a curricular emphasis in the General Education component of the tertiary curriculum, specifically, the General Education (GE)1 with descriptive title, Understanding the Self. The course opens up avenue for students towards knowing their individual selves with the end in view of promoting self-understanding of their multi-faceted personality.

The delivery of instruction for this course, just like any other course, is also confronted with challenges on the part of teachers, particularly in seeing to it that learning takes place among the students. What is noteworthy is that there are available books and other sources be they print or digitized which tackle the concept of self-understanding or understanding the self. There is doubt, however, as to whether or not the availability of these learning resources is enough to bring about quality learning among students who are left to themselves to learn. Much more so when the current situation dictates that face-to-face interaction among learners and teachers are not adequately feasible. Unless these learning materials are packaged to fit the mold of self-learning and independent learning, the delivery of instruction will always run the risk of attaining inadequate education for the learners.

Modular teaching is not new to the field of education, but its relevance to the evolving adoption of learning modes that are not solely based on face-to-face learning has been brought to the fore due to restriction in physical social interaction. The call of the times is to equip the learners with an adequate understanding of themselves in terms of their self-efficacy, capability, or motivation to learn, among others, through independent learning. The role of self-instructional module in promoting learning through independent learning needs not be overemphasized.

The teachers, too, are faced with the challenge of transforming themselves into curriculum planners or designers, aside from being the direct implementers of the curriculum as subject matter experts. Module making is a difficult task such that it requires capability-building efforts to equip teachers with the efficacy to develop self-instructional modules to cause learning to happen in the lives of the learners, be they in the midst of pandemic or in an atmosphere of social peace. The words of Khalil and Elkhider (2015) echo the challenge and emphasize that faculty members who teach in higher education as subject matter experts lack formal training in the science of instruction and instructional design. This is so in the sense that, in contrast to subject matter experts, instructional designers are formally trained to use several instructional design models that have been developed for systematic planning and development of instruction.

Goode (2003) [2] sees the push, such that with the proper training and support, educators in the traditional learning environment can do and produce quality instructional materials which are beneficial to both the learners and the educators.

There has been an increasing focus on modular approach of learning in higher education institutions (HEIs). Modular approach is an emerging trend of educational thinking that shifts traditional method of instruction to an outcome-based learning paradigm (Dejene and Chen, 2019) [1]. As a teacher in general education, conducting developmental research on making Self-Instructional Module (SIM) is a systematic way of learning the skills and offer better learning opportunities for students for independent learning. In this premise, the researcher finds a motivating force in conducting research on the development of modules in GE 1- focused on understanding the self for instructional use in La Carlota City College.

2. Statement of the problem

This study mainly aimed to develop Self-instructional Modules (SIMs) in General Education 1 – Understanding the Self for first year college students.

Specifically, this study was conducted to accomplish the following purposes:

1. Design and develop self-instructional modules in General Education 1- Understanding the Self based on course competencies covering topics on the Self from Various Perspectives, Unpacking the Biological Self, Managing and Caring the Social Self, and Unfolding the Self Awareness with the following components:
   a. Title of the Module
   b. Overview
   c. Learning Objectives
   d. Pretest
   e. Learning Activities
   f. Self-Learning Tasks
   g. Posttest
   h. References
   i. Key Answers

2. Evaluate the quality of the SIMs in GE 1 – Understanding the Self in terms of the following aspects:
   a. Objectives
   b. Contents
   c. Format and Language
   d. Presentation
   e. Usefulness

3. Utilize self-instructional module in General Education for development and instructional use.

3. Related literature

Modular Teaching Approach and Independent Learning

Education evolves. The characteristics of learners, considering their nature, access to borderless information, and the demands of life, keep on changing. The breakthrough in information technology all the more makes teaching and learning complicated. It is complicated in the sense that it becomes challenging to make teaching relevant to learning if teaching were to mirror learning. The need to make teaching relevant and responsive to the instructional needs of the students is demanding. Thus, inevitably, the teachers are tossed to the wind of change, of shifting their pedagogical paradigm from mere providers of information as facilitators of learning to facilitators for the acquisition of learning by the learners. Teacher-centered curriculum has shifted to student-centered school where the uniqueness of the learners as human beings becomes the nexus of all educational practices.

One of the educational practices that promotes student-centeredness is the use of teaching approaches that cultivate self-learning, self-discovery, or independent learning. This is where modular teaching approach comes into the picture. The teacher-dominated classroom becomes obsolete, and the classroom atmosphere where the learners experience their rate and speed of learning, their interests and motivation, or their needs and aspiration as unique individuals are of utmost consideration. The work of Torrefranca (2017) [13]; citing Jenkins & Walker (1994), discussed that this innovative instructional design which can complement the traditional face-to face instruction is called programmed instruction in module form. This approach, often called modular approach, consists of self-directed learning activity packets that are self-instructional, self-paced, student directed, and place the responsibility of learning on the students. Basically, the basic principles of modular instruction involve the division of the curriculum into limited units or modules of learning which are assessed at the end of that unit, with the student building up a degree through such learning being credited.

There has been an increasing focus on modular approach of learning in higher education institutions (HEIs). Modular approach is an emerging trend of educational thinking that shifts traditional method of instruction to an outcome-based learning paradigm (Dejene and Chen, 2019) [1].

Modular instruction is an alternative instructional design that uses developed instructional materials which are based on the needs of the students. Students are encouraged to work on various activities that are interesting and challenging to maintain focus and attention, thereby encouraging independent learning (Nardo, 2017) [8]. This nature of instruction uses a module as a unit of work in a course of instruction that is virtually self-contained and a method of teaching that is based on the building up of skills and knowledge in discrete units (Malik, 2012; in Dejene and Chen, 2019) [1].

Modular teaching is concerned for each student as an individual with his/her own special attitude and interest, goal of helping each student to think for her/himself, and allowing the individuality to each learner. The emphasis is

on individual students with unique abilities, aspiration, and influencing experiences and to provide quality education, the teacher must personalize and individualize the instructional program. When a teacher is devoted to individual learning, he/she finds time for personal discussion with students and giving them individual help. The individual learning helps in developing many notable and self-reliant characters, and in much more modern ways, students enjoy periods in which they pursue their interests and satisfy their curiosities (Manlove and David, 1985; in Dejene and Chen, 2019) [1].

Modular approach to teaching enables the learner to have control over his/her learning and accepts greater responsibility for learning. It demands greater maturity on the part of the learner, the module is more appropriate for more mature students. In modular approach, all the capabilities required to perform are closely related, since sets of tasks are grouped together (Sejpal, 2013; in Dejene and Chen, 2019) [10].

Torrefranca (2017) [13], in the review of concepts and perspectives on modular approach that promotes self-directed learning, explained that the necessity for learners to become self-reliant, self-disciplined, and self-confident in their ability to direct their own learning is becoming increasingly important in today's sophisticated society. Self -directed learning (SDL) refers to the capacity of learners to plan, implement, and evaluate their own learning activities. That is, SDL contextualizes the process in which the learner takes the initiative and responsibility for setting his/her own learning goals, identifying and addressing gaps in his/her learning, identifying resources, selecting and carrying out learning strategies and evaluating his/her own learning.

Nardo (2017) [8] claimed that the use of module encourages independent study. It directs students to practice or rehearse information. To gain mastery of the concepts, exercises are given following the progression of activities from easy to difficult. The arrangement of the exercise as such formalizes the level of difficulty that the learners can perform. Further, the author discussed the benefits of using modules for instruction to include the acquisition of a better self-study or learning skills among students. They engage themselves in learning concepts presented in the module. They develop a sense of responsibility in accomplishing the tasks provided in the module. With little or no assistance from the teacher, the learners progress on their own.

According to Lardizabal *et al.* (1996); in Yazon (2016) [15], students can find the following advantages in using the modules: They work at their own pace; They assume responsibility for learning; They find that textbooks are not the only source of learning; They know exactly what they have to learn; They are encouraged to master the module; and Competition for grades is reduced. For teachers, as Lardizabal further claimed, the modular teaching is beneficial to them due to the following reasons: Teachers have time to pay attention to individual learning problems; They can identify problems earlier; They are free to serve as resource persons to answer and help those who need help; There is better cooperation between teacher and students.

According to Suwanawongse (1991; in Larawan, 2013) [4], modular instruction meets all conditions for effective learning whereas the other methods of study meet only very few. All elements are brought together in time and space. Individual differences are catered to and the objectives are achieved because students work on them at their own pace. They have built-in statements of objectives informing students about what they should be able to learn after instruction. The modules have the information sequenced in logical steps. Then testing is undertaken to make sure that students can follow the steps. Modules also utilize unlimited scope for a wide variety of media and methods. Only modules can combine various types of students' participation into one learning sequence.

The study of Mijares (2008) [7] highlighted the role of modular instruction in improving the performance of students. Using an evaluated module in Drafting which she designed and developed in the conduct of an experimental study, the two groups of students were compared in their performance in terms of theoretical knowledge and manipulative skills in Drafting. The study found that those in the experimental group performed better in the theoretical knowledge and manipulative skills than those in the control group. This indicated that the use of modular instruction is more effective than using the common lecture-discussion method in teaching this course, although the lecture-discussion method was also found to contribute to the performance of the control group when the pre and post scores were compared.

Designing and Development of Instructional Modules

Designing and developing modules to be used in instruction entail various preparations not only in terms of resources to be used, the instructional competencies to be acquired, the nature and needs of the target audience or users of the modules but also in terms of the efficacy of the module makers who are responsible for the production of quality instructional modules.

There are many considerations in designing and developing instructional modules. For one, the student is one important consideration. The student wants a more individualized approach to the course content so that his/her prior knowledge and personal characteristics are taken into account. As Dochy (1989; in Tate *et al.*) puts it, modularization will generally allow a student to learn at his/her own pace. By definition, an appropriate pace may allow the learner to skip modules if he/she already knew the material. Offering pretests for each module is a critical element to modularization towards the administration of the posttests. In the work of Tseng, *et al.* (2008; in Tate, *et al.*), they emphasized that modular learning arranges information in a way that present points in an intelligent way, and it can be individualized according to learners' needs. Modular courses tend to use learning objects that are more closely related to a holistic approach to information; often including a problem-oriented approach.

Designing modules is a great privilege, but also a responsibility. It can be difficult, when starting out designing modules, to know where to begin. According to Toohey (1999) [12], there are three key things to think about when designing a module which can apply to any teaching subject. These are as follows:

1. Be clear about the module purposes and aspirations for student participants and communicate these to students. It's important to have clear, achievable goals or outcomes for the module. What do you want students to know, understand and/or be able to demonstrate after they complete your module? We would usually call these aims learning outcomes or objectives. Learning outcomes are statements of what skills, knowledge, or

learning a student will have once they have completed the module.

Many learning objectives are based on a hierarchical model of learning first articulated by Bloom in the 1950s. Bloom's model has been critiqued and modified since then, but it is still useful for thinking about learning outcomes. Bloom categorises learning into gradually increasing levels of sophistication, beginning with surface learning skills, such as recall of information, moving to deeper learning skills of assessment and evaluation. Typical learning outcomes for a module might map onto Bloom's hierarchy, indicating the development of learning over the course of the module.

2. Make sure your module is constructively aligned (the learner actively constructs their own understanding and all teaching and assessment is aligned with the intended outcomes.

   A successful module is one in where the stated learning outcomes or objectives align with teaching activity and assessment (what has been called constructive alignment). In other words, in the context of the learning outcomes, what learning activities do you want your students to engage with? What kinds of activities would lead to achieving the learning objectives? What content will be needed to achieve learning outcomes? What support will the learners need to achieve the learning outcomes? What is the best way to assess how far students have achieved the learning outcomes? How might you review or evaluate the course to find out if it has successfully aligned learning outcomes with activity and assessment?
3. Considering the course in context (department, institution, sector) Finally, it's important to think about what might affect the design of a module in your context. This is likely to change the way you think about designing outcomes, learning activities, and assessment. The following points are to be considered in designing or developing a module:

- The type of course (How long is the course? How many students? What level (e.g., undergraduate or postgraduate)? What type of students (e.g., visiting students, practitioners)?
- The resources available (Who is involved? How are roles allocated? What administrative support is available?)
- Your disciplinary context (how is the subject normally taught in your discipline? Are there any broader structures to consider (e.g., professional bodies that accredit courses)?
- National and legal requirements (Equality and diversity legislation; UK academic infrastructure and internal requirements).

A module is a short unit of instruction dealing with single conceptual unit of subject matter. It is a self-contained and independent unit of instruction with the primary focus on a few well-defined objectives. Relatedly, according to Purashothaman, 1987; in Padmapriya, 2015) [9], a teaching/learning module should have four criteria, namely, (a) It presents or defines a set of learning situation, (b) It has its own carefully specified function and be directed at clearly defined objectives, (c) It includes tests designed to guide the learner or teacher and provide them with feedback, and (d) It is capable of fitting into a variety of learning paths.

Modules have different parts. Yazon (2016) [15] stated that various authors present modules with different parts. For one, a module must have a) Statement of Purpose, b) Desirable Prerequisite Skills, c) Instructional Objectives, d) Implementers of the Modules, e) The Modular Program, f) Related Experience, g) Evaluative Pretest, and h) Assessment of Module. According to Garcia (1996; in Yazon, 2016) [15], a module must have a) Title, b) Target Population, c) Overview, d) Objectives, e) Instructions to the Learners, f) Entry Behavior and Prerequisite Skills, g) Pretest, h) Pretest Feedback and Evaluation, i) Learning Activities, j) Posttest, k) Posttest Feedback and Evaluation. Lardizabal *et al*. (1996; in Yazon, 2016) [15] mentioned that the module must have a) Statement of Purpose or Rationale, b) Pretest, c) Objectives, d) Instructional Activities, and e) Posttest.

Larawan (2013) [4] cited Querubin (1996) and SEAMEO-INNOTECH (1991) in presenting the components of the module. These components include: 1) the instructions which explain the structure of the module and the procedure employed in working through it, giving emphasis to what the learner is expected to do during all phases of study; 2) purpose and aims for whom to module is intended and where it fits a programme and a course within the programme; 3) list of pre-requisite in knowing and defining the actual needs in achieving the objectives of a module; 4) list of instructional objectives in behavioral terms which is a critical part of the module; 5) list of equipment and other resources such as tools, video-tapes, and film strips, necessary to supplement the module; 6) a sequenced instructional activities which form the core of the module and set out the input-processing output or input-practice task-feedback sequences for each activity in turn; and 7) mastery post-test that should correspond to one-to-one with the specific objectives of the modules.

In the absence of the teacher, self-learning modules allow the learners to learn at their own pace while acquiring knowledge, skills and attitude. The module consists of the following components: a) Statement of purpose, (b) Desirable pre-requisite skills, (c) Instructional objectives, (d) Entry behavior test, (e) Transaction of instrument, (f) Criterion test, (f) Pretest, and (g) Posttest (Purashothaman (1987; in Padmapriya, 2015) [9].

Modules guarantee immediate comments on the rate of student's progress which information is built in at virtually every step. They can build in genuinely interactive group work as part of the learning experience. In learning situations, the learner has to take an active part in maximizing learning. SEAMEO-INNOTECH (1991; in Larawan, 2013) [4] identified the steps which a learner takes when he/she uses a programmed module to include the following: He/she looks at the objectives to know what he/she is trying to accomplish. Then the learner works through the activity units which consist of frames. Frames are small units of information which are presented to the learner. Priming frame helps the students make the first response in the program. It is written very simply to make sure that the first response the student makes is the correct one. The Teaching Frame also leads the learner from the priming frame to the test frame. The programmer uses a variety of clues or prompts in the teaching frames. Finally, the learner finishes the test frame, the final part purposely made to measure whether or not the student has mastered

the objectives of the program. If the student displays mastery, he/she continues with another program; if not, he takes a remedial assistance.

In the preparation of the modules, the specific criteria considered to zero-in at state-of-the-art modules are given by Querubin (1996; in Larawan, 2013) [4]. These are as follows: First, modules should be self-contained; the content should be prepared to allow students to work independently by themselves and if there is a need for some teacher's assistance, such help will be at its minimum. Second, it should be self-pacing within the time frame provided, thus students in the class achieve different levels of the task; some can finish ahead of the others, some fairly catching up, while others are trailing behind. Third, its topic or subject matter should be short enough and well-defined, making every module take up only one particular concept or topic at a time to allow more in-depth study on one given subject matter. Fourth, modules should be so designed to enable students to achieve successfully the objective explicitly stated in a module; certain encouraging statements appear in it and at the same time direct him to proceed to the next module, or if not advise him to do some remedial work all by himself. Fifth, modules should provide opportunities for interaction with the learner, thus when a student reads a module it would seem as though it were talking to him/her in a conversational friendly manner. Such informal approach encourages him to proceed through the different parts of the module. Sixth, the objectives and activities of the modules should be properly sequenced into a logical arrangement which follows the inductive pattern of learning. Seventh, it should be written in clear and correct language suitable to the level of the target learner because any module becomes useless if its target learner cannot grasp it in terms of its situations, and irrelevant obscure example. Eight, the knowledge presented in the module should be correct and up-to-date. There should not be any room for misleading and obsolete information; therefore, facts and figures should be checked for accuracy in this regard. Ninth, contents in the module should bear no wrong implications or conflict with other subject matters of values. As much as possible, the knowledge contained in the module must have universal meaning that it becomes not only acceptable to one field but also to other academic areas. Tenth, it should utilize every opportunity to achieve affective outcomes of learning. It is the ultimate objective of learning to be concerned with the development of the proper attitudes, appreciation and values in the individual students. Eleventh, modules should contain all the necessary components of an effectively prepared program. Twelfth, components of a module should be highly supportive of one another. For instance, such parts as objectives, learner's activities and evaluation should be interrelated with one another. The suggested activities are used to achieve the predetermined objectives and likewise evaluation is used to find out the extent of the realization of the objectives.

Evaluation of the Quality of Instructional Modules

Instructional modules on Rational Expressions and Variations were developed by Torrefranca (2017) [13] and were evaluated based on experts' judgment on the acceptability of the instructional modules in the aspects of objectives, contents, format and language; presentation; and usefulness. The acceptability of the instructional modules was confirmed as the modules were rated by experts as excellent in all aspects.

The evaluation of the objectives of the modules was done in terms of their being stated in behavioral form; well-planned, formulated, and organized; specific, measurable, and attainable; relevance to the lessons; and responsiveness to the needs of the students.

The experts' judgment on the quality of the contents of the modules focused on the relevance of contents to defined objectives; simple and easy to understand; full discussion of the topics of the lessons; use of illustrative examples and practice tasks are within the level of understanding of the students; and equal emphasis given to each topic.

The evaluation of the format and language of the module focused on format layout that is well-organized and interesting; use of language that is easy to understand; clear, concise and motivating language; well-defined symbols; and concise and easy to follow instructions.

The aspect of presentation was rated in terms of logical and sequential presentation of topics; lesson presentation in unique and original form; clear presentation of learning activities; attractive and interesting lesson presentation; and provision of adequate examples for each topic.

As to usefulness of the module, the evaluators' ratings were directed to its capacity to motivate the students; help students to master the topic at their own pace; allow the students to use their time more efficiently; develop analytical thinking and reasoning skills in solving problems; and the quality of the modules as supplementary materials to cater to the needs of the students.

In 2016, Yazon [15] validated the effectiveness of module in the course, Assessment of Student Learning. It was recorded that the student-respondents highly noticed that each lesson in the module is accompanied by specific objectives which are stated in behavioral terms, measurable, realistic, and attainable. They highly recognized that the ideas, concepts, and points presented in the module are well explained; that expected learning competencies are contained in the modules; that supplementary activities enhance students' understanding of content; that there is adequate presentation/discussion of content; and that the lessons are presented at a pace that allows for reflection and review. In terms of the language used, the students highly acknowledged that the lessons are presented in paragraphs/sentences that are grammatically correct; that the words used in the module are correctly used; that the module is accompanied by clear and specific directions for their use; that the vocabulary used is suitable to the comprehension level of students; and that instructions to students are clear and easy to follow. When it comes to evaluation activities, they declared that the module has provision for pretest, self-assessment and posttest in each lesson; that the test items cover the important competencies to be developed; that there are test items which measure higher-order thinking skills (HOTS); that the items in the evaluation are congruent to the specific objectives; and that the tests/evaluation activities are easy to score.

The areas of evaluation as to specific objectives of the module included the following criteria: 1) Each lesson in the module is accompanied by specific objectives, 2) The objectives are stated in behavioral terms, 3) The specific objectives are measurable, 4) The specific objectives are realistic, and 5) The specific objectives are attainable.

As to contents, the module was rated according to the following criteria: 1) Expected learning competencies are contained in the module, 2) The lessons are presented at a pace that allows for reflection and review, 3) There is adequate presentation/discussion of content, 4) The ideas, concepts and points presented are well-explained, and 5) Supplementary activities enhance students' understanding of the content.

In terms of language used, the evaluation criteria included the following: 1) The words used in the module are correctly used, 2) The vocabulary used is suitable to the comprehension level of students, 3) Instructions to students are clear and easy to follow, 4) The lessons are presented in paragraphs/sentences that are grammatically correct, and 5) The module is accompanied by clear and specific directions for their use.

The students' evaluation of module in terms of evaluation activities focused on 1) The module has provision for pretest, self-assessment and posttest in each lesson, 2) The tests/evaluation activities are easy to score, 3) The items in the evaluation are congruent to the specific objectives, 4) There are test items which measure higher-order thinking skills (HOTS), and 5) The test items cover the important competencies to be developed.

In 2013, Larawan [4] designed and developed a Teacher-Made Module in Production Management, and it was presented to evaluators to confirm its acceptability. The preparation of the modules was based on careful application of the identified critical elements in mastery learning program (citing Anderson, 1980) which are the following: a) clearly-defined instructional activities; b) small learning units organized around related sets of objectives; c) highly valid, relatively short tests used primarily for diagnostic and prospective purposes; d) preset standards on the tests, which when attained, indicate mastery; e) clear communication with the student concerning what is to be learned; f) provision of corrective loops for students who fail to achieve preset performance standards; and g) monitoring the attainment of the standard. The expert jurors evaluated each of the fourteen modules on the following aspects: a) physical aspects; b) objectives; c) instructions; d) learning activities; and e) evaluative instrument. The results of the evaluation of the instructional materials are the bases for determining the acceptability or unacceptability of the materials. Instructional modules with average ratings of ―very satisfactory are considered acceptable, while those with an average rating of ―satisfactory or below are revised.

4. Materials and methods

In this study, the developmental research approach was used which served as the basis in developing the self-instructional modules. The IPOO model of Brown (1996) was adapted to demonstrate the design-develop-evaluate phases of module making. The Self-Instructional Modules (SIMs) were developed considering the learning competencies based on the CHED Memorandum Order No. 20 series of 2013 and syllabi for GE 1 – Understanding the Self and UNESCO studies.

Respondents

There were six respondents of this study who rendered evaluation of the module. They were implementers of the GE curriculum as members of the faculty and those with expertise. In module designing and development and have instructional supervision as heads of different departments of La Carlota City College. Specifically, the team of evaluators was composed of a College Dean, Assistant Deans, Department Head, GE 1 Professor and an IT expert.

Population and sample size

The evaluators of the instructional modules as output of this research were purposively chosen on the basis of their expertise and supervisory functions in the college, thus, sample size to represent the population was considered not anymore necessary.

Sampling technique

Considering the nature of the research and the nature of research output, purposive sampling technique was utilized to select the jury to evaluate the SIMs as to the various aspects.

Data gathering instrument

In designing and developing the institutional module, the researcher used the CHED Memorandum Order No. 20 series of 2013 RE: syllabi in General Education Curriculum and the syllabi in GE 1 as basis for the identification of the competencies to be included in the designing and development of the self-instructional modules. The SIMs are intended to be used by the First Year College students.

The evaluation of the developed SIMs was undertaken using the instrument on Evaluation of Instructional Module used by Torrefranca (2017) [13] in his research of similar nature. Some of the terms and words of the instrument, however, were reworded to fit the nature of General Education 1 course. The instrument is composed of a total of twenty-five items distributed to five parameters, namely, objectives, contents, format and language, presentation, and usefulness. At the end of every item are five number codes where the evaluators have to circle one to indicate their judgment as to the quality of the module.

The following are the number codes with their corresponding verbal interpretation:

Number Codes	Verbal Interpretation
5	Strongly Agree(SA)
4	Agree(A)
3	Undecided(U)
2	Disagree(D)
1	Strongly Disagree (SD)

Validity and reliability of the research instrument

The instrument on the evaluation of the instructional module was adapted from conducted research with minor rewording on the name of the course, specifically, from Algebra to General Education 1. However, to further ensure the use of a valid evaluation tool, the instrument was submitted to experts for their comments, suggestions and improvements. The evaluation of experts was facilitated considering that their judgment as to the quality of the SIMs were based on the examination of the actual copy of the developed module.

Data gathering procedures

For the conduct of the study, the following procedures were considered:

First, a letter of request was made by the researcher recommended by the adviser and the Dean of La Carlota City College Graduate School addressed to the College President to seek approval for conduct the study (Please see Appendix A).
Second, prior to the evaluation of the module, letters were sent to the panel of experts to seek permission to evaluate the quality of the modules.
Third, with the permission, copy of the instrument (Please see Appendix B) and of the developed modules were personally distributed to the evaluators. The researcher, too, personally retrieved the accomplished instrument for data organization.

5. Results and discussions

The Design of the SIMs in General Education 1

The objective of this developmental research was to design SIMs in General Education 1 covering four perspectives or topics, namely, The Self from Various Perspectives, Unpacking the Biological Self, Managing and Caring the Social Self, and Unfolding the Self-Awareness based on the learning competencies of the General Education 1 course. These four topics were modularized for independent learning, and each is composed of eight parts. The learning competencies per module were identified. Table 1 presents these competencies per topic which are arranged logically as basis for module designing and development.

Table 1: List of Competencies of General Education 1

Topics	Course Competencies
The Self from Various Perspectives	Discuss the different representations and conceptualizations of the self from various disciplinal perspectives.
	Compare and contrast how the self has been represented across different disciplines and perspectives.
	Examine the different influences, factors, and forces that shape the self.
	Demonstrate critical and reflective thought in analyzing the development of one's self and identity by developing a theory of the self.
Unpacking the Biological Self	Explore the different aspects of self and identity.
	Demonstrate critical, reflective thought in integrating the various aspects of self and identity.
	Identify the different forces and institutions that impact the development of one's self and identity.
	Examine oneself against the different aspects of the self-discussed in the course.
Managing and Caring for the Social Self	Understand the theoretical underpinnings for how to manage and care for different aspects of the self.
	Acquire and hone new skills and learning for better managing of one's self and behaviors.
	Apply these new skills to one's self and functioning for a better quality of life.
Unfolding the Self-Awareness	Evaluate how social norms and the expectations of authority influence one's personal decisions and actions and examine how the norms and expectations of different societies and cultures influence decisions and behaviors.
	Evaluate personal abilities to gather information, generate alternatives, and anticipate the consequences of decisions.
	Evaluate how responsible decision-making affects interpersonal and group relationships and apply the skills to establish responsible social and work relationships.
	Plan, implement, and evaluate one's participation in activities and organizations that contribute to one's school and the local community.

Designing the SIMs in General Education 1 required a revisit on the part of the researcher the pertinent documents such as issuances of CHED on module writing and the institutional policy on module development. Review of related literature was also done to gather valuable insights on module designing that can be of use in setting direction for module writing. The course competencies as basis for learning outcomes were also revisited as these competencies serve as primary basis in the formulation of objectives and instructional activities of the module.

The Development of the SIMs in General Education 1

The designing phase of the SIMs in General Education 1 directed the module writing towards how the module tentatively looked like upon its completion. In the process, pertinent documents on module development such as CHED issuances, General Education Curriculum (GEC), course competencies, and institutional requirements were revisited as inputs for the formulation of the various components of the SIMs. Review of related materials to include conceptual and research literature was also done to gain insights on module development, particularly on the functions of the parts of the module and how they were developed by several proponents.
As designed, the SIMs in General Education 1 which is described as Understanding the Self are composed of four topics which were modularized to represent various perspectives. Prior to the start of the first module, the course module as a whole provides five informational components which generally can provide module users with instruction and background about the General Education 1 course. These components include Instruction to the User, Course Description, Course Objectives, Scope of the Course Module, and Components of Each Module. These are described as follows:

Instruction to the User

This portion welcomes the students to modularized instruction in General Education 1. It orients the users on the complementary role of General Education Curriculum as one curricular component of the degree programs, the need for modular instruction as a learning modality specifically in the absence of face-to-face interaction and an expectation for them to make use of the module to their best learning advantage.

Course Description

This part orients the students on the nature and contents of the course. It likewise highlights the emphasis of the course to provide the students with a fuller picture of what the course is all about.

The Course Objectives

This portion orients students about what the course General Education 1 as a whole intends particularly in equipping them with understanding and learning competencies that

they have to possess after completion of this module.

Scope of the Course Module
This part presents an illustration depicting the four modularized topics which are arranged chronologically in relation the contents of the course. This provides the students with the sequence of modules to be learned in the process.

Components of the Learning Module
Each module is composed of various elements or parts which guide the students in their study of the course. The elements are logically arranged such that the users are directed to new phase of learning upon their completion of the previous one. The followings parts direct and aid the students as they immerse into their self-learning activities:
Title of the Module, Overview, Learning Objectives, Pretest, Learning Activities, Self-Learning Tasks, Posttest, References and Key Answers. These components are described as follows:

Title of the Module
Each module has a title corresponding to the topics of the course. The title informs the students of the start of the new module after completing the previous one. The title shows to the user the specific topic of the module which is made clear, concise, and reflective of its contents.

Overview
This part introduces the students to the theme of the module and describes its scope and rationale. It summarizes the purpose, content and importance of the module.

Learning Objectives
These are statements about the knowledge, skills, and attitudes that the students will learn or develop. They are stated in terms of the learner's behavior. They will help the users in doing self-evaluation.

Pretest
The students have to take the pretest prior to their study of the lessons. The pretest is designed to determine their baseline knowledge about the concept or content of the module. The key answers for the pretest are provided at the end of every module.

Learning Activities
This is the component of the module where the students' learning takes place as this is the heart of the lesson. This provides them with materials to read, analyze the contents, relate to actual situations to form their perspectives on the topics.

Self-Learning Tasks
This provides the students with self-check exercises to reinforce the learning outcomes they gained after the lesson presentation.

Posttest
Before finishing this module, the students will take the posttest which is designed to measure their understanding of the concept and the retention of the information gained from the module. The key answers are provided at the end of the module.

References
This is a list of books or guides used in the preparation of the module or other materials that the students may consult for further understanding or appreciation of the lesson presented.

Key Answers
These are the answers to the pretest and posttest. The students can refer to them to compare their scores in both tests.
The output of this developmental research – the SIMs in General Education 1 – Understanding the Self is reflected in the succeeding pages.

Results of Evaluation of the SIMs in General Education 1
Another objective of this developmental research focused on the evaluation of the SIMs in the various aspects, namely, objectives, contents, format and language, presentation and usefulness.
The objectives of the modules were evaluated in terms of their being stated in behavioral form; well-planned, formulated, and organized; specific, measurable, and attainable; relevance to the lessons; and responsiveness to the needs of the students.
The contents of the modules were evaluated in terms of their relevance to defined objectives; simple and easy to understand; full discussion of the topics of the lessons; use of illustrative examples and practice tasks are within the level of understanding of the students; and equal emphasis given to each topic.
As to format and language of the modules, the evaluation focused on format layout that is well-organized and interesting; use of language that is easy to understand; clear, concise and motivating language; well-defined symbols; and concise and easy to follow instructions.
The aspect of presentation was rated in terms of logical and sequential presentation of topics; lesson presentation in unique and original form; clear presentation of learning activities; attractive and interesting lesson presentation; and provision of adequate examples for each topic.
As to usefulness of the modules, the evaluators' ratings were directed to its capacity to motivate the students; help students to master the topic at their own pace; allow the students to use their time more efficiently; develop analytical thinking and reasoning skills in solving problems; and the quality of the modules as supplementary materials to cater to the needs of the students.
A team composed of six evaluators was organized to ascertain the quality of the module in terms of the given parameters. The result of the evaluation served as basis of the recommendation for the instructional utilization of the SIMs in teaching General Education 1. The evaluation results are shown in Tables 2, 3, 4, 5, 6 and 7.

Table 2: Results of Evaluation of the SIMs in Terms of Objectives

Objectives	Mean	SD	Interpretation
1. The objectives are clearly stated in behavioral form.	5.00	0.00	Excellent
2. The objectives are well-planned, formulated and organized.	4.83	0.41	Excellent
3. The objectives stated are specific, measurable and attainable.	5.00	0.00	Excellent
4. The objectives are relevant to the topics of each lesson of the modules.	5.00	0.00	Excellent
5. The objectives take into account the needs of the students.	5.00	0.00	Excellent
Overall Mean	4.97	0.41	Excellent

Table 2 shows the overall mean score of 4.97 on the aspect of objectives of the SIM which is described as excellent. Examining the mean score per item, with mean scores ranging from 4.85 to 5.00, the SIM in this aspect was rated excellent in every item. The SDs which range from .00 to .41 indicate a narrow dispersion of the scores from the mean and this indicates that the evaluators were homogenous in their evaluation of the objectives of the module. Their ratings confirmed that the objectives of the module are well-planned, formulated, and organized; they are stated in behavioral form such that they are specific, measurable and attainable; they are relevant to the topics; and they are need-oriented.

The succeeding discussions focus on the results of experts' evaluation of the contents of the modules. Table 3 presents these pertinent data.

Table 3: Results of Evaluation of the SIMs in Terms of Contents

Contents	Mean	SD	Interpretation
6. The content of each lesson is directly relevant to the defined objectives.	5.00	0.00	Excellent
7. The content of each lesson is simple and easy to understand.	5.00	0.00	Excellent
8. The topics of each lessons are fully discussed.	4.83	0.41	Excellent
9. The topics are supported by examples, and the practice tasks are suited to the level of comprehension of the students.	4.83	0.41	Excellent
10. Each topic is given equal emphasis in the lesson.	4.83	0.41	Excellent
Overall Mean	4.90	0.41	Excellent

It is shown in Table 3 that all the items characterizing the contents of the SIMs obtained mean scores which range from 4.83 to 5.00 to earn an excellent rating. The mean score per item resulted to an overall mean of 4.90 which is described as excellent. The SDs which range from 0.00 to 0.41 indicate that the homogeneity of the ratings of the evaluators considering the narrow dispersion of the scores from the mean. This evaluation result confirms the quality of the module in terms of its contents. The contents are characterized as being directly relevant to the objectives; simple and easy to understand; fully discussed with examples and tasks within the students' level of comprehension, and are treated with equal importance.

Another aspect of the SIMs which was evaluated was on the format and language of the module. Table 4 presents the data pertinent to this evaluation.

Table 4: Results of Evaluation of the SIMs in Terms of Format and Language

Format and Language	Mean	SD	Interpretation
11. The format/layout is well organized, which makes the lessons more interesting.	4.83	0.41	Excellent
12. The language used is easy to understand.	5.00	0.00	Excellent
13. The language used is clear, concise and motivating.	5.00	0.00	Excellent
14. The ideas, concepts and points used are easy to understand.	5.00	0.00	Excellent
15. The instructions in the instructional module are concise and easy to follow.	5.00	0.00	Excellent
Overall	4.97	0.41	Excellent

As shown in Table 4, the overall mean score of 4.87 indicates that the aspect on format and language of the modules was rated excellent. This can be attributed to the mean scores obtained in the various items which were also rated as excellent. The SD ranges from 0.00 to 0.41 reveal the homogenous ratings of the evaluators on this aspect of the modules. The evaluation reports that the format/layout of the modules is well-organized; the language used is clear, concise, motivating, and easy to understand. The instruction given to the students are concise and are easy to follow.

The ratings on the aspect of the presentation of the contents of the modules are shown in Table 5.

Table 5: Results of Evaluation of the SIMs in Terms of Presentation

Presentation	Mean	SD	Interpretation
16. The topics are presented in logical and sequential order.	5.00	0.00	Excellent
17. The lessons of the modules are presented in a unique and original form.	4.83	0.41	Excellent
18. The learning activities are presented clearly.	5.00	0.00	Excellent
19. The presentation of each lesson is attractive and interesting to the students.	4.83	0.41	Excellent
20. Adequate examples are given to each topic.	4.83	0.41	Excellent
Overall	4.90	0.41	Excellent

As to presentation of contents, Table 5 shows the overall mean score of 4.90 which indicated that the evaluators rated the modules excellent in this aspect. This resulted from the mean scores obtained in the various items which ranged

from 4.83 to 5.00 which is described as excellent. The module presentation obtained excellent evaluation as the module is seen to characterize as being logical and sequential in presentation of the topic; the uniqueness and originality in the presentation of the lessons; clear presentation of learning activities; attractive and interesting lessons; and adequate examples provided to each topic. The overall SD of 0.41 further shows that the evaluators were homogenous in their rating of the modules in the aspect of topic presentation.

Table 6 presents the results on the evaluation of the usefulness of the modules. As indicated in the table, the overall mean score of 5.00 on the aspect of usefulness of the SIMs is described as excellent. The evaluators were homogenous in their evaluation of the usefulness of the modules. Their ratings confirmed the usefulness of the modules in building the motivation of the students to study General Education 1; in achieving mastery of the topics according to individual pace; in allowing the students to use their time efficiently; in developing the students' higher order thinking skills; and in providing supplementary materials that are need-oriented.

Table 6: Results of Evaluation of the SIMs in Terms of Usefulness

Usefulness	Mean	SD	Interpretation
21. The instructional module will motivate the students to study the course.	5.00	0.00	Excellent
22. The instructional module will help the students master the topics at their own pace.	5.00	0.00	Excellent
23. The instructional module will allow the students to use their time more efficiently.	5.00	0.00	Excellent
24. The instructional Module will develop the analytical thinking and reasoning skills of the students.	5.00	0.00	Excellent
25. The instructional module will serve as supplementary material that can cater to the needs of the students.	5.00	0.00	Excellent
Overall	5.00	0.00	Excellent

Table 7 shows the summary of the evaluation of the quality of the modules in terms of the five parameters.

Table 7: Overall Results of Evaluation of the SIMs

Aspects of the Module	Mean	SD	Interpretation
Objectives	4.97	0.41	Excellent
Contents	4.90	0.41	Excellent
Format and Language	4.97	0.41	Excellent
Presentation	4.90	0.41	Excellent
Usefulness	5.00	0.00	Excellent
Overall Mean	4.95	0.41	Excellent

Table 7, shows the overall results of the evaluation of the SIMs resulting from the means obtained in the various aspects of the modules. The overall mean score of 4.95 indicates that the modules were rated excellent. The various aspects also obtained mean scores ranging from 4.90 to 4.97 which fall within the excellent rating. This further indicates that in terms of its aspects, the modules possess quality that makes them acceptable for instructional use. Across the aspects of the modules, the evaluators were noted to be homogenous in their ratings of the attributes of the modules.

6. Conclusion

The findings of this study are reported as follows:

1. The design of Self-Instructional Modules in General Education 1 Towards Understanding the Self encompassed topics representing the curricular contents of the course and are based on course competencies as identified in General Education curriculum.
2. The development of the SIMs took into consideration the various components desired in a module which were formulated according to standards in module making.
3. The evaluation covered five aspects of these developed SIMs which included objectives, contents, format and language, presentation, and usefulness. Overall, the SIMs were evaluated to have excellent quality. All the aspects of the modules were also evaluated as having excellent quality.

This study concluded that the SIMs in General Education 1 Towards Understanding the Self, as designed and developed, possess excellent quality according expert evaluation and that can be useful for utilization in instruction.

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