

# Design and Validation of an Instructional Module for Business Planning in the BS Entrepreneurship Program

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## ABSTRACT

The rapid change in the curriculum and the increasing demand of education shifted the pedagogical knowledge and skills requirements of teachers. In this time of pandemic, the use of modular instruction to facilitate learning and mastery of the content is advised. The study applied the designed-based research (DBR) approach using the ADDIE model to develop and validate a business plan module for Entrepreneurship students. Experts' Evaluation Checklist of the Instructional modules, pretest, and posttest for instructional module and students' evaluation checklist of the instructional modules was employed in gathering data. Findings revealed that the contents of the module which the students and subject specialist evaluated was rated excellent which indicates that it was perceived as significant instructional material for their course. Meanwhile, the design characteristics, learning activities, and reliability of the designed module which the students evaluated have resulted in a mean average of 4.60 and were rated as excellent and which the subject specialist evaluated have resulted in a mean average of 5.00 and were rated as excellent. This indicates that both the students and subject specialist perceive the design characteristics, learning activities, and reliability of designed module as significant instructional material for their course.

**Keywords:** Instructional materials, content, design, validity, reliability

## INTRODUCTION

Teaching is a process of learning Pahl, (2019). It is a way of sharing wisdom and molding the character and attitudes of its learners. Study revealed that teachers are faced with challenges because of the changes in the curriculum and the increasing demands of education. (Aydin et.al, 2017; Boelens et.al, 2017; Brown, 2016). They are required to have the basic knowledge and skills in their subject areas. With this, teachers are expected to enhance their pedagogical knowledge and skills significantly through the years. (Choy et al., 2013; Bello et.al., 2021; Lauermaann & König, 2016)

Many teachers choose to focus on instructional approaches to enhance learning (Khaled, et.al, 2020; Pan, et.al., 2020; Tiruneh, et.al. 2018; Panacci, 2017). They should be an expert in determining the need of the learners as well as their own professional need. (Petroski, D. J., & Rogers, D., 2020; Cañabate, et.al, 2019 Colomer et.al., 2018). In addition, Ozga, J., & Lawn, M. (2017) emphasize that teachers are the foundation of the education system. Instructional materials serve a channel between the teacher and students in delivering instruction, (Assefa, M., 2019; Nwabueze, A. I., 2016). However, education system rapid change in the education system triggers the adoption of a learner-centered rather than teacher-centered approach which requires the teacher to prepare activities that will easily facilitate the learning needs of the students. (Lojdová, K., 2019; Kaymakamoglu, 2018; Mpho, 2018; Dole, et.al, 2016; Beavers, 2016). Furthermore, E.C. Torrenfranca, 2017 states that module, as a self-instructional material, can be used as a supplementary material to help the student catch up with the missed lessons.

Business Planning is one of the integral parts of the Entrepreneurship curriculum that requires the student to prepare a plan of their proposed business. McKeever, M. (2016) confirmed in his book that starting a new venture is crucial without a guiding plan. It requires awareness of the procedures what and how to do from its

organization to implementation of strategies being developed. Failure to prepare a plan is a waste of money and resources. Also, business planning is the core of organization and business strategy whether a new venture, expansion, or looking for funding opportunities. A business plan will determine the capability of the would-be entrepreneur to start a new business activity, recognized errors in paper rather than in the marketplace, and identify areas of business operation needing improvement to increase the profit of a proposed venture. (Navarro, 2015)

Most businesses are not successful despite a great start-up idea. Paradkar, et.al., 2015). According to common statistics, 90% of businesses fail, and the remaining 10% only last the first five years of operation. (Holm, 2018) There are several reasons such as limited to customer service, poor logistics and cost management, and inadequate product. Furthermore, (Laage-Hellman, et.al., 2018) emphasized the necessity of inheriting technical innovation to transform ideas, which has a significant impact on standing in the early stages of commercial operations. However, the major reason is the lack of an appropriate business plan. Investors do not look at the financial capability of the plan but at how customers are being satisfied.

Since a business plan is important to the would-be entrepreneur. The teacher must prepare a guide that will facilitate their learning abilities. According to (Olayinka, 2016) students taught with instructional materials have higher scores than those without any material. Also, the teacher can easily evaluate the output of its learners. For the past years of teaching business plan, the researcher strongly believes developing a business plan understanding manifest the ability of the student to relate with actual business scenarios as anchored in the creation of the instructional module.

There is a need to develop a module for Business Plan that is acceptable and understandable to both the students and subject specialist to promote entrepreneurial skills and creativity of the students. Kusumaningrum et al., 2016; Hidayat and Hendra, 2017; and Ganefri et al., 2017 states the same ideas that Entrepreneurship module by using Product-Based Learning Approach aims to make the students be able to develop the potential, the creativity and the ability to produce products that are needed by the community and has a sale value. This was aligned to the study of (Yulastriet al., 2017) that students are less motivated to learn entrepreneurship course through boring lecturers and irrelevant learning materials. Studies of Vinokurova, et.al. 2016; and Hasanah, 2016 also states that, module is a resource that contains materials, methods, limitations, and evaluation systematically arranged and attractive.

Given this, it is believed that the development and validation of instructional material in business plans for entrepreneurship students would provide a clearer understanding on the part of learners, help develop skill mastery, and increase students' motivation to do tasks and competencies required to them. The researcher considered the used of ADDIE model in the development of the instructional module. The study aims to develop and validate instructional material for Business Plan. Specifically, it aims design instructional modules on Business Planning, establish the validity of the content, design characteristics, learning activities, and reliability of the designed module; and evaluate the designed module.

## METHODOLOGY

The study has been conducted at Isabela State University Cauayan Campus, San Fermin, Cauayan City during the 2nd semester 2020-2021. The participants of the study were the five (5) Subject specialists and twenty-five (25) third-year BS Entrepreneurship students who have subjects in Business Plan Preparation. The researcher has adopted and employed the Evaluation Checklist of the Instructional modules designed in Isabela State University. Due to the COVID situation at present, Google forms were also employed in the data collection. The researcher sent the module to the subject specialists and students. This study applied designed-based research (DBR) approach to develop and validate a business plan module that serves as a guide for the implementation of the proposed business of the Bachelor of Science in Entrepreneurship students. This study considered the ADDIE model which helps instructional designers, any content developer, or even teachers to create an efficient, effective teaching design. It is a systematic process which composed of five phases are Analysis, Design, Development, Implementation, and Evaluation.

Each phase in the ADDIE model is related to the different stages. Analysis Phase implies setting goals and

identifying where you want your learners to be. It involves analyzing the learners, preparation of instructional analysis, instructional goal creation, and learning objectives analysis. The design phase evolves and focuses on designing assessment for (his/her) topic; select a form of the course, and making their instructional strategy. The development phase determines the instructional activities. The implementation phase is the realization of the plan. This phase requires three major steps which are training the instructors, preparing the learners, and organizing the learning environment. The final phase is the evaluation which involves the assessment of each step to ensure that the goals are set to meet the needs of the learners.

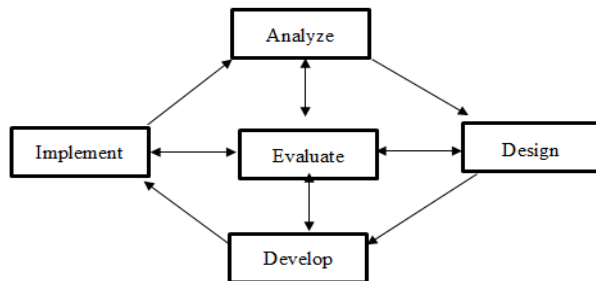


Figure 1. ADDIE Model Instructional Design

Figure 1 shows the model used in the study. The study is also aligned to Jerome Bruner's Process theory of learning in which learners select, transform information and evaluate whether the information acquires is appropriately utilized. Instruction must match the level of the learners which helps teachers in planning and preparing appropriate instructional material that fits the learners' level of difficulty.

Descriptive statistics using the Likert Scale were utilized in analyzing the evaluation ratings of experts and student-respondents as well as the pretest and posttest scores obtained by the student respondents. The textual interpretation was also used in reporting the supporting qualitative data.

To compare the evaluation ratings of experts with that of student-participants, The Independent Samples *t*-Test was used as a statistical analysis set at 0.05 level of significance was performed. It compares the means of two independent groups to determine whether there is statistical evidence that the associated population means are significantly different. The Independent Samples *t*-Test is a parametric test.

Finally, to ascertain the effectiveness of instructional modules, the pretest results were also compared statistically with the posttest results using paired *t*-test set at a 0.05 level of significance.

## RESULTS AND DISCUSSION

### Design Instructional Modules on Business Planning

Instructional modules on business planning are meant to offer a whole framework for imparting entrepreneurial knowledge. The results of developing these modules are presented in this part together with its implications for improving business planning education.

Main components comprised the instructional courses on business planning:

*Module 1. Business development and feasibility study.* Crucially for evaluating the viability of commercial concepts, this section presents the idea of a feasibility study. It also addresses corporate growth stages, so offering understanding of how corporations change with time.

*Module 2. Writing an Executive Summary.* The emphasis of this session is on creating a succinct business plan overview, or executive summary. It covers a synopsis of the company, its goals, offerings of goods or services, target market, and financial forecasts.

*Module 3. Development of the marketing plan.* This module addresses important elements including the marketing mix (product, price, promotion, and place), competition analysis, market area appraisal, market survey implementation, and target market identification.

*Module 4: Management Plan and Organization.* This subject looks at several firm ownership structures and helps students to build a complete business profile. It covers stating the goals, vision, mission, and organizational structure of the business.

*Module 5: Operation and Production Strategy.* Emphasizing the manufacturing process, this module addresses equipment and raw material procurement, plant capacity assessment, labor demand and cost analysis.

*Module 6: Financial Plan.* The last lesson covers financial planning including loan payment plans, financial analysis, investment costs, equity loans, collateral, and financial reporting.

These instructional courses guarantee that students acquire a thorough knowledge of the entrepreneurial process by means of a disciplined strategy to educate company planning. From feasibility studies to finance strategies, each topic covers a vital component of business development, therefore arming students with the tools required to negotiate the complexity of entrepreneurship successfully.

These courses provide students a whole learning experience that improves their critical thinking, problem-solving, and strategic planning abilities by combining information across several corporate disciplines (Frederick et al., 2016; Kuratko, 2018).

The practical nature of the courses lets students apply theoretical ideas to real-world situations, therefore helping them to construct strong business plans. The modular approach lets teachers be flexible in their instruction, therefore allowing them to customize the curriculum to fit various student groups and entrepreneurial settings. These instructive courses on business planning offer a strong foundation for imparting entrepreneurial abilities. Through interacting with these courses, students can create thorough business plans combining theoretical knowledge with useful applications, so improving their preparedness for starting their own businesses.

#### *Validity of the Content, Design Characteristics, Learning Activities, and Reliability of the Designed Module*

##### *Evaluation of the Respondents*

The instructional module was evaluated by both teachers and subject specialists to determine the validity of its content.

##### *Evaluation of the Students on the Content*

The results reveal how students determine the material and show quite positive results. With a mean score of 4.64, the accuracy and conformance of the material with curricular criteria received a reasonable assessment. The logical arrangement, scientific precision, and syllabus alignment—with a mean score of 4.64—were likewise considered as really good. Students claimed that the content enabled them to meet their learning objectives (mean of 4.48) and that the objectives were precisely expressed before every topic (mean of 4.9). With a mean score of 4.8 the content was complete, relevant, and successfully synthesized prior arguments; major themes were stressed using keywords, noteworthy concepts, and summaries.

With a mean of 4.80, the dependability and clarity of the material were really remarkable. With a mean of 4.92, the material was seen as comprehensive and enhanced higher-order cognitive skills as well as conceptual clarity. With a mean score of 4.68, the content received compliments for its ethnic diversity and objectivity; similarly, the absence of unnecessary material was highlighted with a mean score of 4.64. The students judged themselves usually as "Excellent," with an average content evaluation score of 4.84.

With an average content evaluation score of 4.84 ("Excellent"), the overwhelmingly favorable student responses emphasizes how valuable the module is as a major teaching tool. Beyond the high marks for relevance, clarity, and accuracy, student comments expressed particular gratitude for the module's featured real-world case studies. This implies that the educational approach of the module, especially in connecting theory and practice, determines its strength not just in its content but also in Although the first chapter, "Feasibility Study and Basics of Business Development," covers the fundamental ideas of technical, economic, legal, operational, and scheduling feasibility, the structure of the module stresses using these ideas all through the business plan



development process. Defining feasibility study and business plan, Chapter 1 clearly establishes the foundation by stressing their shared ground in evaluating technological viability, market potential, and financial viability. But as students work on their own business concepts in subsequent tasks, the degree of research needed for every subject becomes clear. The evaluation results show how effectively these fundamental ideas are incorporated into the useful application of business planning.

The module sets itself apart from generic business plan templates by stressing the importance of the Feasibility Study. From Chapter 1 ("Feasibility Study and Basics of Business Development"), this module delves into the ongoing and iterative nature of feasibility evaluation throughout the whole business planning process, in contrast to modules that consider feasibility as a preparatory phase. As students create their plans, this motivates them to review and improve their feasibility assumptions. As said in Chapter 1, it forces the students to thoroughly investigate the technological viability, financial feasibility, and market potentials. Moreover, it underlines the significance of providing the feasibility report with ethical and sustainable behavior. This strategy guarantees that students realize that effective company planning depends on feasibility, which is dynamic and not a fixed checklist.

The design of the module corresponds with present studies on the efficacy of digital teaching tools and assessment in gadget-based applications by Saragih, et.al (2025). The structure and accessibility of the module help possible future integration of AI-powered tools for feasibility study, including automated market research or financial modeling. Moreover, in keeping with Hera et al. (2025), the module is meant to be flexible enough for both in-person and distant learning situations, so optimizing its influence and reach.

#### Evaluation of the Subject Specialists on the Content

The evaluation of the material by the subject specialist shows an extremely positive result. Perfect 5.00 for both content accuracy and conformity with curricular guidelines denotes excellence. With a score of 4.80, also regarded as exceptional, the logical structure, organization, scientific accuracy, and syllabus conformity were all much complimented. Before every topic, the goals were always clear-cut and received another flawless mark of 5.00. The specialist rated the material 4.80 and confirmed that it really helps to reach learning goals. Key points received a perfect score of 5.00 by use of keywords, key ideas, and summaries, therefore stressing them effectively. Also praised with a perfect 5.00 were the completeness and currency of material as well as its incorporation of earlier debates. The factfulness' dependability and clarity came in at 4.80. Moreover, the depth of the material, improvement of conceptual knowledge, and use of higher order thinking abilities obtained a perfect 5.00. With a rating of 4.80, the content's freedom from bias and ethnic diversity was observed; likewise, the lack of extraneous material was favorably appreciated with a score of 4.80. The subject specialist gave the material an average score of 5.00, so rendering a "Excellent" assessment overall.

The result reveals that the contents of the module which the subject specialists evaluated have resulted in a mean average of 5.00 and were rated as excellent. This shows that the subject specialists perceive the contents of the module as significant instructional material for their course.

#### *Evaluation of the Students on the Design Characteristics, Learning Activities, and Reliability of the Designed Module*

Student evaluations of the module's features, learning activities, and reliability are positive. With a mean score of 4.60, the module's coherent units—which promote thought and discussion—were clearly excellent. Appreciated also was the consistency of the layout, with a mean score of 4.56. With a mean of 4.60, students felt the directions for teachers and themselves to be rather clear. With a mean score of 4.64, the reading level suited for the target customer was admitted to be appropriate. With a mean of 4.76, the module regularly demanded active participation from students, therefore inspiring them to keep on learning and master ideas with a mean of 4.68. With a mean of 4.60, the usage of visuals and pictures was perceived as advantageous in making lessons easier to learn; the given examples were regarded as meaningful and helpful, with a mean of 4.64. With a mean score of 4.68, the delivery approach judged suitable and effective in involving students. At last, the material's flexibility for use by other faculty was scored with a mean of 4.52. The students rated the module's design qualities, learning activities, and dependability average score—4.60—which indicates a "Excellent"

rating overall.

The table shows that the design characteristics, learning activities, and reliability of the designed module which the students evaluated have resulted in a mean average of 4.60 and were rated as excellent. This indicates that the students perceive the contents of the module as significant instructional material for their course. Likewise, as E.C. Toorenfranca 2017 insights, states that the findings on this kind of study brought about the implications for both theory and practice regarding the usefulness of modules in classroom instruction and subject specialist devising the modules.

#### *Evaluation of the Subject Specialists on the Design Characteristics, Learning Activities, and Reliability of Designed Module*

The evaluation of the intended module by the subject specialist reveals a number of strengths. With a top score of 5.00, which denotes excellence, the coherent components really inspire debate and thought. With a 4.80 grade, the consistency of the pattern was also well appreciated. Though with a somewhat lower score of 4.40, the clarity of directions for both teachers and students was praised. At 4.80, the reading level's fit for the target audience was quite high. The module's capacity to regularly involve students actively achieved a score of 4.80; its success in inspiring ongoing learning and concept mastering earned a flawless 5.00. Lesson understanding was scored at 4.40 for graphics and pictures. With a score of 4.80, students found the examples to be rather meaningful and useful. With a 5.00 the delivery technique was praised for its relevance and effective student involvement. At last, the material's flexibility for usage by other teachers received a 4.80 rating. With an average module evaluation score of 5.00, the specialist marks "Excellent".

The result reveals that the design characteristics, learning activities, and reliability of the designed module which the subject specialist evaluated have resulted in a mean average of 5.00 and were rated as excellent. This indicates that the subject specialists perceive the design characteristics, learning activities, and reliability of designed module of the module as significant instructional material for their course.

The consistent "Excellent" evaluation (5.00 average) of the topic experts validates the rigor and applicability of the module in the field of business plan preparation. Indicating its great practical focus, specialists especially praised the module's thorough review of feasibility study components (as described in Chapter 1) and its emphasis on including these components throughout the business planning process. The review of the topic experts underlined the specific contribution of the module: it moves from seeing feasibility as a first step to an integrated and iterative process. Through stressing the continuous improvement of feasibility assumptions all through the business plan preparation, the program helps students to build a more critical and flexible mentality. This method conforms to industry best standards and gives students the tools they need to negotiate the ever changing demands of practical business contexts. The specialist pointed out how thoroughly technical, financial, legal, operational, and scheduling issues were covered throughout the module. By verifying if the activities assist the students in a technical, economical, legal, operational, and scheduling sense, specialists especially confirmed the module's covering of the essential "Areas of Project Feasibility" defined in Chapter 1. The clear focus on all five areas of project feasibility helps students to have a complete awareness of the important elements affecting corporate performance.

#### *Evaluation of the designed module*

The study shows that there is no significant difference between the student and subject specialist in terms of the evaluation of the design of the module for Business Plan for BS Entrepreneur Program.

Table 1

Independent Samples Test			
t-test for Equality of Means			
	t	df	Sig. (2-tailed)

ContentAve	-2.138	24.000	.043
<b>DEsignAve</b>	<b>-3.464</b>	<b>24.000</b>	<b>.002</b>
OrganizationAve	-2.753	24.000	.011
AssessmentAve	-2.753	24.000	.011
AverallAve	-2.138	24.000	.043

The table shows that the mean average for the design statistically has no significant difference because the value in the “Sig.(2-tailed) row is less than 0.05. This finding shows similar result to the study of D.J. Naval 2014 wherein the assessment of the students, peers and experts on the acceptability of the developed modules has no significant difference among the said participants of the study.

## CONCLUSION

This study shows that both of the students and subject specialist both agreed that the content and design characteristics, learning activities, and reliability of Business Plan module were significant. It is important to validate that Business Plan subject from the students and subject’s specialist before its application. Also, the participation of the said respondents in the study were significant to verify the validity of the said module. Specifically, the researcher has hopes that by the result of this study, students and subject specialist were able to use the module for the the Bachelor of Science in Entrepreneurship Program effectively.

## RECOMMENDATION

The researcher also recommends that this study may be replicated by other researchers by preparing other instructional modules for other topics, directing or conducting an experimental design to validate further the findings of this study and using the five-point Likert Scale in interpretation of the results and attitude of both students and subject specialist towards modular instruction may be studied.

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## Ethical Approval

The research conducted was carried out in line with ethical guidelines for those involving human subjects. Ethical clearance from Isabela State University came before data collecting. Each participant gave informed permission, therefore guaranteeing privacy and voluntary participation.

## Conflicts of Interest

Regarding this project, the authors declare they have no conflict of interest. Validation, production, or research of the instructional module was not influenced by financial, personal, or professional relationships.

## Data Availability

Confidentiality agreements with the participants and institutional restrictions prevent the public access to the data supporting the conclusions of this study. Reasonable request to the author, subject to ethical and legal considerations, may therefore make relevant data available.