The Use of ADDIE Model in the Development and Evaluation of a Training Module for Administrative Leadership and Decision Making in State Higher Education Institutions

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Abstract

This research aimed to find out the extent of administrative leadership and decision making (ALDM) practices and the least mastered topics of the respondents on leadership and decision making as bases for the development and evaluation of training module in ALDM. This study, which was carried out on the basis of evaluation research design, utilized the ADDIE model in the development of the training modules. The quantitative results were subjected to descriptive statistics which were mean scores, standard deviations, and ranks. The respondents in the analysis phase were the 35 permanent personnel of SUCs in Panay and there were 14 tryout participants in the implementation phase. The seven areas under the ALDM were generally perceived to be highly practiced by the respondents from the total rating of "Highly Practiced." This shows that even though the respondents do not hold top management designations, they already demonstrated to a substantial extent their knowledge and skills necessary for a leader. The entirety of the training module was remarkably accepted as "excellent" by the tryout participants and experts. It can be concluded then that the developed training module is an effective and suitable training material to augment any trainings in ALDM.

Keywords: *ADDIE model, training module, development and evaluation, administrative leadership, decision making*

Introduction

Leaders in higher education must make sure that they coach and mentor their faculty in order to enable academic staff, administrative personnel, and faculty members to gain leadership abilities according to Varada (2022). Today, embracing continuous professional development is critical for faculty members, academic staff, and even graduate school students to survive and succeed. On the other hand, the effectiveness of the training materials determines the success of staff training initiatives. The efficacy of the training program is diminished if the course materials are not interesting and well-written. In addition to providing useful knowledge during new recruit onboarding, training materials enable departmental tasks in the absence of key workers by offering on-demand support to employees/participants, who will eventually become leaders and administrators.

In order to address the scarcity, if not complete lack, of validated training materials to support and strengthen professional development trainings, such as in the area of administrative leadership and decision making specifically for state institutions of higher learning, the study pursued the direction on the development and evaluation of training modules based on the results on the extent of practices on administrative leadership and decision making of the participants and their least mastered topics on the stated topics.

Specifically, this study intends to ascertain the respondents' level of administrative leadership and decision-making practices as well as identify the administrative leadership and decision-making topics that they find most difficult. It also intends to develop an administrative leadership and decision-making training module based on the respondents' leadership and decision-making practices to cater the least mastered topics of the respondents; determine how acceptable is the developed training module as evaluated by the experts; and find out the evaluation of the participants on the training module.
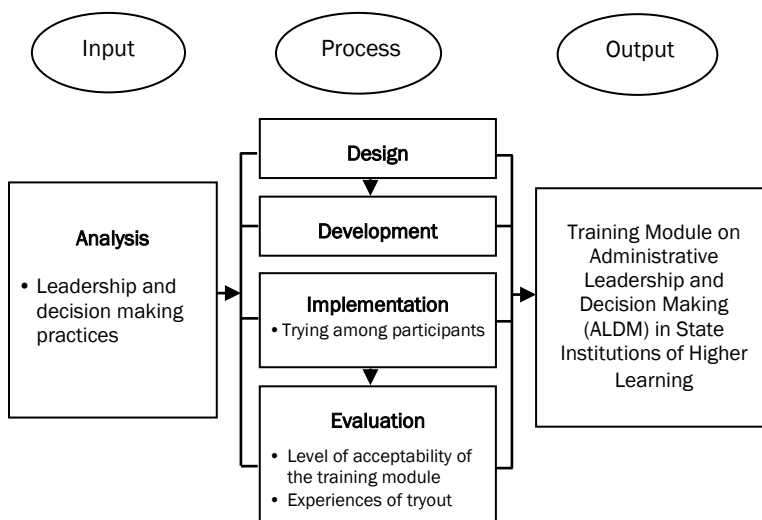
Figure 1. *The development and evaluation of the training module in administrative leadership and decision making using the ADDIE Model*

Significance of the Study

All SUCs may find great value in the study's conclusions, which aim to demonstrate the training module's contribution to administrative leadership growth and decision-making. Additionally, the study's findings might aid in their preparation and administration of the classroom. After reading the findings, faculty members may be encouraged to create training modules tailored specifically for higher education students, as they recognize the value of giving students leadership experiences during their time in college and teaching them how to define their identities, build relationships in teams, and complete tasks successfully.

Scope and Limitations of the Study

The main aim of the research was to ascertain the administrative leadership and decision making extent of practices and the least mastered topics of the respondents as bases for the development of training module in administrative leadership and decision making.

The ADDIE Instructional Model Design phases were adhered to in the development and assessment of the training module in ADLM.

The respondents in the analysis phase of the study were delimited to 35 personnel of state institutions of higher education in the whole Panay; there were 14 participants for the tryout of the training module.

The research employed ADDIE (analysis-design-development implementation-evaluation) approach for evaluation research in order to build and assess the training module that would be applied to enhance and reinforce ALDM trainings.

Related Literature

Academic authors have given trainings a great deal of attention in their research because they have long been recognized. Many definitions of training have consequently been developed. According to Tian et al. (2016), training is the deliberate and methodical alteration of behavior through learning chances, initiatives, and programs that help participants acquire the abilities, competencies, and skill levels required to do their professions to the best of their abilities. The fact that academics are still debating the value of training research is a noteworthy development as the area is investigated further.

Some of these academics contend that the recent rise in the acceptance of the importance of training can be attributed in large part to the improved competitiveness and relative success of businesses that prioritize employee development. In keeping with the above, Walton and Zhang (2017) point out that organizational

transformation and technology improvements have gradually led to some employers, including presidents, realizing how important it is for them to invest heavily and continuously in their employees' skills and abilities in order to ensure their success.

In order to create successful instructional activities and programs, it is crucial to evaluate instructional materials, such as training modules. This is because it encourages material creators to be reflective practitioners (Schon, 2020) and actively consider what they need and want from their materials, how they are used in practice, and what impact they have. Pre-use, in-use, and post-use are the three phases of the evaluation cycle that were developed. If materials are used in activities, training, or programs—that is, if they do not employ the dogma approach—then the evaluation of those materials is essential to moving forward, to continuously respond to the needs and wants of users, the micro and macro contexts, and in doing so, maintain the users' motivation and interest. The difficulty here is that, rather than only occurring during the selection phase when choosing materials for a course or training, evaluation is an intentional, ongoing process that occurs throughout the use of the content.

Methodology

Research Design

The study was conducted using an evaluation research design, which is defined by Kellaghan (2010) as a methodical, disciplined approach to systematic inquiry aimed at determining the assessment or appraisal of a system, material, program, practice, activity, or object. Both quantitative and qualitative methodologies, or a combination of the behavioral and social sciences, are used to characterize disciplined and methodical study.

The ADDIE development paradigm was used in this study for the training module's creation and evaluation.

Participants

There were three groups of participants who took part in this study.

Firstly, the 35 personnel of State Institutions of Higher Learning (SIHL) from the seven State College and Universities (SUCs) in Panay, Visayas, Philippines. They were determined using the purposive sampling due to the wide scope of data gathering considering the geographical locations of state universities in Panay. Secondly, the Experts. Evaluated the training module before the implementation. Lastly, the tryout Participants. They utilized the training module, and they also evaluated the material. The participants were 14 comprising of 13 graduate school students enrolled for the degree Master of Public Administration (MPA) in Second Semester of Academic Year 2022-2023, and their (1) subject professor.

The Research Instruments

There were two research instruments used in the study: (1) the validated Researcher-made Test on Administrative Leadership and Decision Making Practices; and (2) Generic Instrument for the Review, Evaluation, and Approval for the Use of Any Instructional Materials. The second instrument was adopted with permission from the University Policy and Guidelines Manual for the Preparation, Evaluation, and Approval for Utilization of the Instructional Materials Produced by the faculty of the Aklan State University.

Research Procedure

As this study adopted the framework of ADDIE in the development and evaluation of the training module, the procedure followed the sequence and the step in each phase. In the *Analysis* phase, the topics for content of the training module were identified. The *Design* phase followed after determining the topics to be modularized. After the identification of the design, *Development* phase then followed. The development of the training module started with putting together the information gathered in the previous phases. Next was the *Implementation* phase. This was the tryout of the training module to the participants. The last phase was the *Evaluation*. This refers to the output evaluation of the process and the product.

Data Analysis Procedure

For the descriptive data analysis procedure, frequency scores, mean scores, and ranks were used to determine the extent of practices of the respondents on leadership and decision making and the least mastered topics after the test in ALDM was checked, and in the evaluation of the training module according to its (a) content; (b) format and presentation; (c) efficacy of material; and (d) performance measures.

Results and Discussion

The results show that the extent of administrative leadership and decision making practices of the 35 Personnel of state institutions of higher learning (SIHL) has an overall rating of "Highly Practiced" ($M = 3.96$, $SD = .433$). Results in most of the domains have the extent of "Highly Practiced" in the following: practicing ethical decision making ($M = 4.00$, $SD = .685$), making decision making accordingly ($M = 3.91$, $SD = .742$), developing self and others ($M = 3.85$, $SD = .610$), leading with flexibility ($M = 3.54$, $SD = .610$), and managing state institutions of higher learning ($M = 3.42$, $SD = .608$).

Table 1
Results of the Extent of Administrative Leadership and Decision Making Practices of the Respondents

Indicator	SD	M	Description
Applying the foundations of leadership	.815	4.65	Extremely practiced
Enabling leadership	.490	4.37	Extremely practiced
Practicing ethical decision making	.685	4.00	Highly practiced
Making decision making accordingly	.742	3.91	Highly practiced
Developing others and self	.355	3.85	Highly practiced
Leading with flexibility	.610	3.54	Highly practiced
Managing state institutions of higher learning	.608	3.42	Highly practiced
Overall Rating	**.433**	**3.96**	**Highly practiced**

Note: Description is based on the following scale. 4.20-5.00: Extremely Practiced; 3.20-4.19: Highly Practiced; 2.60-3.39: Practiced; 1.80-2.59: Somewhat Practiced; 1:00-1.79 Not Practiced

Table 1 may seem to show that the respondents' strong knowledge on the foundations of leadership are practiced on a great extent. This proves the importance of mastering the fundamentals or the prior knowledge (Beyth-Marom et al., 1991; Fleishman, 2003; & Sternberg, 2013) helps a person achieve mastery in any skill or goal in whatever he or she pursues. Recent research shows that prior knowledge, or what you already know, is a key factor in performance, including decision making. Recent findings by decision scientists Bhargava, Loewenstein, and Justin (2017), for example, illustrate the difficulty of making good healthcare plan decisions without adequate and accurate prior knowledge (Vincent, Decker, & Mumford, 2002; Judge et al., 2004, Keller, 2006). Put differently, the effects of intelligence on leadership performance are mediated through expertise, knowledge, and skills for working with this knowledge (Daly et al., 2015, Lord et al., 1986). Clearly, interventions can be developed to provide people with the knowledge they need to perform in complex tasks (Goldstein & Ford, 2002) – including leadership tasks. Moreover, the available evidence indicates that we can formulate interventions to provide people with the skills they need to work with this knowledge as they work on leadership tasks (Scott, Leritz, & Mumford, 2004).

On being an enabling leader, the results reveal that the respondents are already practicing to a great extent. In the study of Schulze & Pinkow (2022) on how enabling leaders create adaptive space, findings indicate that leaders predominantly achieve this by providing employees with head space and opportunities to connect with others and promote diversity within their organizations.

The findings also show that competence is a key determining factor for someone in producing excellent performance. In a collective situation, competence is a key determinant of success in organizations (Par et al., 2016). Employees are the driving force for the development and implementation of public services (Yusuf, 2021). The employees' development is a very important part of the process of increasing the capacity or ability of the employees (Par et al., 2016). However, weak abilities, insights, behaviors, and mindsets possessed by employees have an impact on the performance of public service delivery (Yusuf, 2021).

Further, the results may seem to reveal that the respondents are, to considerable extent, showing and practicing what flexible leaders are by embracing change, welcoming to new ideas, and by working with wide spectrum of people. The comparative studies find both similarities and differences in the essential activities and relevant behaviors for different types of positions. Research on managers at different levels found that the relevant roles and behaviors vary from first-line supervisors to top executives (Clark et al., 2016). Research comparing different types of management positions (e.g., staff vs. line position, sales vs. production) also finds important differences in the required skills and behaviors. The cross-cultural research on leadership provides additional evidence of the need for flexibility in behavior when taking a management position in a different country (House et al., 2014). The research comparing managerial positions has implications for improving flexible, adaptive leadership. First, managers should proactively seek to reduce constraints, modify demands (role expectations), and expand their choices over time. Second, a person's ability to adapt to different requirements should be considered in making selection and promotion decisions. Third, a variety of different types of challenges and leadership positions early in one's career can help individuals become more flexible and adaptive. The research at CCL identified types of challenges that are relevant for developing different leadership skills (e.g., McCauley, Eastman, & Ohlott, 2005).

According to Koziol-Nadolna and Beye (2021) in their research on *Determinants of the Decision-making Process in Organizations*, the decision-making process is one of the most important elements of management in today's organizations, mainly because it affects the success or failure of the entity. According to Villanueva et al. (2019) competent government employees should be able to perform decision processes and make decisions with favorable effects that are considered favorable from both perspectives.

Table 2
Respondents' Least Mastered Topics in Administrative Leadership and Decision Making

Topics	M	SD	Rank
Managing state institutions of higher learning (Administrative leadership)	.608	3.42	7
Leading with flexibility (Styles of leadership)	.610	3.54	6
Developing self and others (Leadership competencies)	.355	3.85	5
Making decision making accordingly (Process of decision making)	.742	3.91	4
Practicing ethical decision making (Ethical decision making)	.685	4.00	3
Enabling leadership (Enabling leadership)	.490	4.37	2
Applying the foundations of leadership (Models and theories of leadership)	.815	4.65	1

Table 2 shows the results of the 35 respondents' least mastered topics in ALDM. Out of seven major topics as expressed through the different areas in the extent of ALDM practices, *developing self and others*, *leading with flexibility*, and *managing of state institutions of higher learning* ranked the least bottom three – fifth, sixth, and seventh respectively. Thus, these three least mastered topics were used as the content topics for the developed training module in ALDM.

The process of finding out the least mastered topics of the respondents is the needs analysis in every development of any instructional materials

such as training manuals in education and business and industry sectors. Needs analysis is done in such a way that ultimately the organization or company can find out whether the problem really needs to be solved through a training program or not (Irianto, 2017). According to (Mangkunegara, 2015), training needs analysis is a systematic study of an educational problem by collecting data and information from various sources, to obtain problem solving or suggestions for further action. Training needs analysis is an analysis of workplace needs that is specifically intended to determine what the priority training needs are (McCauley, Eastman, & Ohlott, 2005; Blanchard, Nick, & Thacker, 2003). Information on these needs will be able to assist companies in using resources (time, funds, etc.) effectively while avoiding unnecessary training activities. Training needs analysis is a diagnosis to determine the current and future challenges that must be faced today and future challenges that must be met by training and development programs (Rivai dan Sagala, 2013).

The analysis of training needs is to identify problems that exist in the company or organization through training programs (McCauley, Eastman, & Ohlott, 2005; Blanchard, Nick, & Thacker, 2003). According to (Suwatno dan Doni, J, 2011), straining needs analysis is one of the components of training that is useful for knowing the need for training that must be carried out in an analytical process, both at the organizational, position, and individual levels (Molenda, Pershing, &

Reigeluth, 2006; Kuzmits & Micahael, 2002). With this needs analysis, it will later assist organizations in utilizing existing resources effectively and efficiently (both time and cost) and prevent unnecessary training activities.

Designing the Training Module. After determining the topics to be modularized, the researcher structured the training module. The researcher structured the content whether the end-user may be as the trainer or as the trainee. In the process of developing the training module in ALDM, outlined procedures were adopted to achieve the purpose of this study. In determining the design of each training module, the researcher decided to adapt the institutionalized format used for any instructional materials development in the university where he is now connected.

The adapted format has now the following parts: (1) Title, (2) Scope, (3) Objectives, (4) Introduction (4) Discussion of Topics, (6) Self-Check Test, (8) Reflection Time, (9) Training Activities, and (10) References.

Development of the Training Module ALDM Based on the Design. In the Analysis Phase, the contents of the training module were identified, while in the Design Phase, the researcher decided to adapt the institutionalized format for IM development of Aklan State University (ASU) and this served as the framework of each training module that comprised the training module. These determined the criteria set forth the development of the training module.

Table 3

Evaluation Results for the Developed Training Module in ALDM as Evaluated by Tryout Participants

	SD	M	Evaluation
Physical aspects	.609	4.97	Excellent
Contents	.000	5.00	Excellent
Objectives	.035	4.96	Excellent
Instruction	.031	4.98	Excellent
Learning activities	.028	4.96	Excellent
Evaluate measures	.038	4.97	Excellent
Overall Ratings	**.015**	**4.97**	**Excellent**

Note: Description is based on the following scale. 4.51-5.00: Excellent; 3.51-4.50: Very Good; 2.51-3.50: Good; 1.51-2.50: Fair; 1.00-1.50: Poor

Data in Table 10 reveal the level of acceptability of the developed training module in ALDM based on the evaluation of the participants with the rating of "Excellent" acceptability (M = 4.97; SD = .015). Results of each area of evaluation were also excellent in the following areas: physical aspects (M =4.97; SD = .069), contents (M = 5.0; SD = .000), objectives (M =

4.96; SD = .035), instruction (M = 4.98; SD = .031), learning activities, (M = 4.96; SD = .028), and evaluative measures (M = 4.97; SD = .038).

These findings validate what Wentling (2016) stated that an effective training material depend on the well-defined training objective that will keep all involved on the right track throughout the training. They provide an important link between the needs assessment and the design and preparation of the training materials. The trainer can assess if the objectives were met, indicating whether the training was successful in meeting (University of Maryland, 2012). The result agrees with the findings of Inyang (1997) that training for employees is effective when the speaker make use of training manuals. On the other hand, in the field of education, Lance et al. (1999), Todd and Kuklthau (2004) confirmed a significant correlation between the presence and the use of library materials by the students and teachers with better performance. Similarly, Todd & Kuklthau

(2005) found a simple correlation between the employee's inputs and better performance achievement. Analysis shows that the availability and the use of chalkboard, training modules and manuals, audio-visual aids, and the use of training kit have positive impact on the performance output of the new employees. Also, Emma & Ajayi (2004) asserted that "training equipment and materials have change over the years, not only facilitate employee training situation but also address the instructional needs of individuals and groups." Okendu (2012) asserted that regular instructional supervision has a significant bearing on employees' work performance. He also, affirmed that adequate supply of instructional resources has significant effect on employees' performance. Onasanya and Omosewo (2011) confirmed that both standard and improvised instructional materials and training manuals have the same positive effects on users' performances.

Table 4
Summary of the Results of Acceptability of the Training Module in Administrative and Decision Making as Evaluated by Experts

	Evaluator				SD	M	Evaluation	Rank
	1	2	3	4				
Physical aspects	4.83	5.0	3.84	5.0	.557	4.66	Excellent	4
Contents	4.83	5.0	4.17	5.0	.395	4.75	Excellent	2
Objectives	5.00	5.0	3.20	5.0	.900	4.55	Excellent	5
Instruction	4.83	5.0	4.83	5.0	.098	4.91	Excellent	1.5
Learning activities	4.83	5.0	4.83	5.0	.098	4.91	Excellent	1.5
Evaluative measures	4.83	5.0	3.60	5.0	.676	4.6	Excellent	3
Section Mean	**4.85**	**5.0**	**3.98**	**4.97**	**.504**	**4.70**	**Excellent**	

Note: Description is based on the following scale. 4.51-5.00: Excellent; 3.51-4.50: Very Good; 2.51- 3.50: Good; 1.51-2.50: Fair; 1.00-1.50: Poor

Data in Table 4 reveal the level of acceptability of the developed training module based on the evaluation of the experts with the overall rating of "Excellent" (M = 4.70; SD = .504). The results of the evaluation were also excellent in the following areas: physical aspects (M = 4.66; SD = .557), contents, M = 4.75; SD = .394), objectives, (M = 4.55; SD = 900), instruction (M = 4.91; SD = .098), learning activities (M = 4.73; SD = 308), and evaluative measures (M = 4.6; SD = 676). The results of the present study confirmed the conclusion made by Mullins (2017) in his study on the effectiveness of the training materials on employees' performance that a well-constructed training manual is

necessary to ensure that the trainings are effective to make sure that employees are technically and socially competent for both departmental and management positions. If the instructional materials when properly used in teaching learning situations and even in trainings can accomplish a lot of complex tasks (Lowenstein, 2012). The instructional materials also offer real experiences in giving the trainers basis for thinking and understanding (Ismail & Aleem, 2013). At the same time, they overcome the limitations of time, space and size by helping the attendees to understand things that are too small or too big, or too slow or too fast (Adeniyi, 2011).

Luan (2019) stated that training materials must supplement trainings to enhance superior skills, knowledge, capabilities and outlook of the employees that results in effective performance of the workers. Training should be viewed therefore as an integral part of the process of total quality management (Sabir, 2014).

Conclusions and Recommendations

The findings from the study show that the seven domains of administrative leadership and decision making (ALDM) were generally perceived to be highly practiced. Even though the personnel of state institutions of higher learning (SIHL) do not hold top management designations, they already demonstrated to a substantial extent their knowledge and skills on the process of evaluating and choosing among various approaches of decision making in a manner consistent with ethical principles when it comes to ethical decision making.

Administrative leadership is the least mastered topic as the respondents were from the academe and office staff and do not hold any top management designations.

The entirety of the developed training modules in ALDM has adequately covered all the aspects of the instruction and superior is the quality of work based on the excellently acceptable evaluation in the areas of physical aspects, contents, objectives, instruction, learning activities, and evaluative measures, according to the evaluators: the experts and the tryout participants.

State institutions of higher learning may conduct annual review of their development and training plans to ensure that the needs of the personnel are properly and timely addressed.

Trainings on the development of the training modules, training materials, materials packages, and other similar instructional materials with emphasis on the development of blended training modules may be conducted periodically for the faculty members of higher learning and be encouraged to create and develop similar training materials not only about leadership because most of the state institutions of higher learning aspire to be a training provider.

State institutions of higher learning particularly those with public administration/management programs may consider offering short-term government courses and workshops which shall be designed not only for public administrators and civic leaders but also for those interested employees from any organizations.

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