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Developing an ADDU Online Pedagogical Framework



Abstract: - Online instruction has emerged as a popular alternative to face-to-face classroom instruction. It provides educational opportunities to individuals with geographic, time, or other constraints that make education difficult or impossible to pursue and another option to those who prefer online learning's flexibility and instructional delivery method. One of the constraints and challenges that education institutions are confronted with is the threat brought about by COVID-19 pandemic that made physical relationship and interactions difficult for teachers and students in the usual classroom setting. This study was conducted to develop an Ateneo de Davao University (ADDU) online pedagogical framework that will help guide the university's shift to online education. Following a developmental research design with twenty (20) participants involving a founder and nineteen (19) co-founders of the ADDU Center for Educational Research and Advocacy (ACERA) and the approved minutes as the main source of data, results were established. The results included the general framework of ADDU online pedagogy or education, considerations of Ignatian Pedagogical Paradigm (IPP) as an overarching framework and Analyze, Design, Develop, Implement, Evaluate (ADDIE) model which complements with formation, and metrics for evaluation to measure ADDU's model for instruction. In conclusion, the study identified five major themes for online education which include teachers' competencies and strategies for teaching online, preparation of instructional materials, agency of the student, formation in an online platform of instruction, student assessment and learning outcomes; developed a framework for online education in considerations of IPP as an overarching framework and ADDIE model which complements with formation; and proposed metrics to measure and evaluate the effectiveness, impact, and sustainability of University's platform of online instruction.

Keywords: ADDIE Model; IPP; Kirkpatrick Model; and Online Education

1. Introduction

Chris Dede, Harvard University professor, explains, "... real gains in the productivity and effectiveness of learning will not come until universities radically reshape those structures and practices to take full advantage of the technology" [1].

Since the first massive open online courses (MOOCs) were launched, prestigious public and private universities as well as for-profit providers (Heller, 2013; Lewin, 2012) enrolled millions of students around the world in these courses. Rapid growth in enrollment occurred, in part, by the emergence of three leading platforms in the MOOC market – Coursera (founded by Stanford University professors), Udacity (progeny of Palo Alto), and edX (jointly founded by Harvard University and MIT). To illustrate this trend, a Harvard University professor offered his popular course, "Concepts of the Hero in Classical Greek Civilization" via HarvardX (Harvard's proprietary line of edX) in Spring 2013, resulting to enrollment that exceeded 31,000 [2].

As cited by [3], systems thinking and systemic change were used as the guiding frameworks for understanding both the macro organizational goals and micro issues dealing with design and development involved with creating and offering a MOOC. A critical facet of systems thinking is to ensure there is alignment between institutional goals and organizational elements (Kaufman, 1988). In the said case study of how systems thinking and the ADDIE model were used to design and develop one of the first MOOCs at a mid-sized university in the southeastern United States, contemporary issues surrounding MOOCs at both the macro university level and the micro instructor level were explored. It was highly recommended in the study that a well-qualified team of both faculty and production specialists is assembled, properly compensated, and works together throughout a carefully implemented instructional design process such as the ADDIE framework that allows for a constant feedback cycle between users and the production team.

In the recent years, online instruction has emerged as a popular alternative to face-to-face classroom instruction. It provides educational opportunities to individuals with geographic, time, or other constraints that make education

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difficult or impossible to pursue and another option to those who prefer online learning's flexibility and instructional delivery method. One of the constraints and challenges that education institutions are confronted with is the threat brought about by COVID-19 pandemic that made physical relationship and interactions difficult for teachers and students in the usual classroom setting. Despite these challenges, schools continue propagating their mission and play their roles in the development of human intellectual capital supportive of the regional and national economic development. E-learning is the most viable modality for independent learners and they should be supported by periodic supervision of parents and guardians. It is delivered through online platform, educational programs, and or printed modules.

The continuous challenges that the educational institutions are confronting today require a strong strategic perspective to care for the future of the present cohorts belonging to the Generation Alpha and the Generation Z, who dominate the current generation in the world of digital communities. In response to these challenges, ADDU initiated innovations aligned with its Vision and Mission. In April 2020, ADDU President, Fr. Joel E. Tabora, SJ commissioned a team from the School of Education (SoE) to conduct the study, *Ateneo de Davao University Near Fully Online Pedagogy in Response to the COVID-19 Emergency*. In an organizational meeting initiated on May 7, 2020 by Fr. Joel E. Tabora, S.J., also the founder of the ADDU Center for Educational Research and Advocacy (ACERA) and participated in by its co-founders, he stressed: "the constitutional mandate to a system of quality education on all levels accessible to all where public and private institutions function in complementarity to each other (Philippine Constitution, Chapter 14) already provides a framework for research." He added that more urgent at this time is the context of ADDU shift to distance or online learning is here to stay. He described, "there is a rubicon that has been crossed by going online. It would be good to support this shift to online education through solid research."

He further stressed that one of the things that can be done is to survey the globe for best practices in online education; to find out where the gold standards in online education are today. Research could be done on the:

1. Online teacher – What is the optimum pedagogy? What are the recommendations for pedagogy of online learning? How will the teacher conduct himself or herself? How will instructional materials (IMs) be best prepared? How will the IMs be organized into bite sizes? What is the optimum pedagogy for our purposes at ADDU?
2. Online student – What is the profile of the ideal online student? Describe the optimum online student. What is the agency of the student? What abilities of students are suited for online learning? What are the necessary metacognitive skills? What is the ability of the student to organize himself or herself, his or her time -- to set for himself or herself targets and purposive activities?
3. Online learning as appropriate to the VM – Some of the Jesuit values are *cura personalis*, *magis*, intimacy with the Lord, excellence and the like. These values still have to be developed even in an online platform. Our commitments to forming people in the faith have to be stressed. How is online formation to be done? How is online guidance to be done? How is pastoral care to be done?
4. Quality assurance online – How do we ensure that what we are saying, that we are achieving, is actually being achieved? How do we take care that the learning outcomes, competencies and formation, that we promised ourselves and the students, are actually being achieved?

1.1 Literature Review

The following are fundamental theories and models that support in framing ADDU's model for instructional design. This study is grounded on the theory of online learning which involves behaviorism, cognitivism, social constructivism, connectivism, community of inquiry, and collaborative online learning; the theories of pedagogy and andragogy; and the use of IPP (Context Experience Reflection Action Evaluation) interfacing with ADDIE (Analyze Design Develop Implement Evaluate) model for instructional design by Kurt which complements with formation; and the Kirkpatrick Model (Reaction Learning Behavior Impact/Results Sustainability/Return on Investment (ROI)) for evaluation.

Theoretical frameworks and models were examined that focus on the pedagogical aspect of online education [4]. Three learning theories, which are meant to explain and help us understand how people learn, such as behaviorism and cognitivism, and social constructivism were highlighted for a multimodal model for online education based on pedagogical purpose. Key to this model is the assumption that online education has evolved as a subset of learning in general rather than a subset of distance learning. The model attempts to integrate the work of several other major theorists and model builders such as Anderson (2011) as cited by [4]. [5] cited In Jarvis's (1985) view, for Knowles, 'education' (teacher and student) is pedagogy, while 'education of equals' (facilitator and learner) is andragogy. Andragogy is labeled as an emerging technology that facilitates the development and implementation of learning activities for adults. Andragogy is a theory specifically for adult learning.

The "community of inquiry" (CoI) model for online learning environments [6] is based on the concept of three distinct "presences": cognitive, social, and teaching. The model supports the design of online and blended courses as active learning environments or communities dependent on instructors and students sharing ideas, information, and opinions. Of particular note is that "presence" is a social phenomenon and manifests itself through interactions among students and instructors. Connectivism, a learning model that acknowledges major shifts in the way knowledge and information flows, grows, and changes because of vast data communications networks. Internet technology has moved learning from internal, individualistic activities to group, community, and even crowd activities [7]. Online collaborative learning (OCL) is a theory that focuses on the facilities of the internet to provide learning environments and foster collaboration and knowledge building. OCL is described as a new theory of learning that focuses on collaborative learning, knowledge building, and internet use as a means to reshape formal, non-formal, and informal education for the "Knowledge Age" [8].

In an Ignatian Pedagogy, teachers accompany learners in their growth and development. Pedagogy must include a worldview and a vision of the human person. IPP is described as a model that speaks of the Jesuit teaching-learning process, addressing the teacher-learner relationship, with practical meaning and application for the classroom [9]. Ignatian Pedagogy embodies five key teaching elements: first, the context: what needs to be known about learners (their environment, background, community, and potential) to teach them well? Second, the experience: what is the best way to engage learners as whole persons in the teaching and learning process? Third, reflection: how may learners become more reflective so they more deeply understand what they have learned? Fourth, action: how do we compel learners to move beyond knowledge to action? And, fifth, evaluation: how do we assess the learners' growth in mind, heart, and spirit? Ignatian Pedagogy promises to help teachers be better teachers. It enables teachers to enrich the content and structure of what they are teaching. It gives teachers additional means of encouraging learner initiative. It allows teachers to expect more of students, to call upon them to take greater responsibility for and be more active in their own learning. It helps teachers to motivate learners by providing the occasion and rationale for them to relate what is being studied to their own world experiences. Ignatian Pedagogy can be applied to all types of delivery, including online. [10] provides the outcomes related to the impact the infusion of the IPP had on the instructors' curricula, pedagogies, instructional strategies, learning activities, and assessment practices, as well as the student-teacher learning relationship.

For many years now, educators and instructional designers alike have used the ADDIE Instructional Design (ID) method as a framework in designing and developing educational and training programs. "ADDIE" stands for analyze, design, develop, implement, and evaluate. This sequence, however, does not impose a strict linear progression through the steps. Educators, instructional designers, and training developers find this approach very useful because having stages clearly defined facilitates the implementation of effective training tools. As an ID model, ADDIE Model has found wide acceptance and use both in the face-to-face and online teaching-learning platforms [11]. [9] described seven principles of effective online teaching which include encourage student-faculty contact, encourage cooperation among students; encourage active learning; give prompt feedback; provide clear instructions regarding due dates and participation; provide clear expectations for student work; and use multiple means of instruction, engagement, and assessment. In addition, the instructional systems design ADDIE model was used to effectively build an online course.

ADDIE Model is used in several studies that utilized experimental designs [12], [13], and [14]; descriptive research [15]; and qualitative studies [16]. Several literatures in the field of nursing and other healthcare professions [17], [18], and [19]; computer studies [20]; philosophy [21]; library science [22]; mathematics [23]

and [24]; and studies in formation and counseling [25] and [26] were published. The researches described that the ADDIE model, as one of the most common models used in the instructional design, is an approach that helps instructional designers, content developers, or even teachers to create an efficient, effective teaching design by applying its processes to any instructional product. Likewise, findings revealed a more effective learning and better performances of students rather than the traditional teaching way [27]. The result supports the finding of several studies that teaching with the ADDIE design model produced better outcomes than the traditional methods of instruction [28].

In evaluating course performance, the Kirkpatrick model was used to evaluate the effectiveness of course content and provide quantitative and qualitative metrics to measure the various aspects of a course. The evaluation can then be used to inform content creators about possible ways to iterate over the course and make appropriate modifications to continue to improve the course experience. It is essential to break down a course into its core components and evaluate each component individually. While there are many evaluation models, Kirkpatrick's Model is often used and is considered one of the best approaches to the course evaluation. The model included level 5 of evaluation which is the return on investment (ROI), a newly added component to Kirkpatrick's Model that evaluates metrics to understand if the course contributed positively or negatively to both the financial bottom line as well as goals of the organization [29]. In a research work related to evaluating e-learning, the study made use of the Kirkpatrick model in conjunction with the ADDIE model. The evaluation of e-learning is a crucial issue for researchers attempting to understand the impact and effectiveness of e-learning in an academic environment [30]. Further, the result of the evaluation can also be useful to instructors in developing interventions to improve the design and delivery of online courses. In one study, it suggested that the Kirkpatrick model is a workable instrument to measure the effectiveness of an Information Literacy (IL) course and to evaluate if the information competencies have been maintained and made useful for further study and lifelong learning [31].

1.2. Conceptual Framework for ADDU's Online Education

The study is guided by the conceptual framework, as shown in Figure 1. The said framework is articulated, given the Vision and Mission and the Administration Formation Instruction Research and Engagement (AFIRE), as guiding principles to approach the strategic goals of the University, the desire to produce graduates with the characteristics of life long learners and a profile of an ADDU's ideal online student shall be achieved through the Ignatian Pedagogical Paradigm (IPP) – (Context, Experience, Reflection, Implementation, Evaluation) interfacing with ADDIE – Analyze, Design, Develop, Implement, Evaluate) which complements with Formation for instructional designs.

The interfacing of IPP and ADDIE which complements with formation informs that the graduates shall be formed holistically, that is, “persons for others.” True to its mission, the University as a Jesuit school amid the COVID-19 pandemic continues to commit itself in responding to the call to human excellence, to the fullest possible development of all human qualities. It is a call to critical thinking and disciplined studies, a call to develop the whole person, head and heart, intellect and feelings.

In the interfacing of IPP and ADDIE which complements with formation, the framework will help instructional designers attain the desired learning outcomes that will prepare graduates to become service leaders in their respective disciplines. The model articulates that teachers' competencies are important to ensure optimal learning among students and realize excellence standards of the University. Hence, the administrative and instructional leadership support and robust research are the interventions that will enable teachers to prepare themselves for challenging tasks and better engagement for an online education in the context of Jesuit education.

To ensure quality assurance in an online education, the framework proposed to conduct a study on the implementation of the strategies or innovations and provided feedback to the University through the use of Kirkpatrick Model for evaluation. Such evaluation followed the levels described by the said model. These levels included reaction, learning, behavior, impact, and sustainability. Results of analysis and evaluation created a perspective that outcomes of teaching-learning or pedagogy via online platform will not simply form students characterized as a life long learner or according to the profile of an ideal online student but also provide a better curve of organizational or university performance and productivity. More so, the outcomes of online pedagogy

will impact sustainability through the University's efforts in providing support to schools and other organizations in Mindanao and beyond. It will impact partnership between the University and public education through sharing of the University's practices of education via online platform and disseminating by way of community engagement, advocacy, and publication.

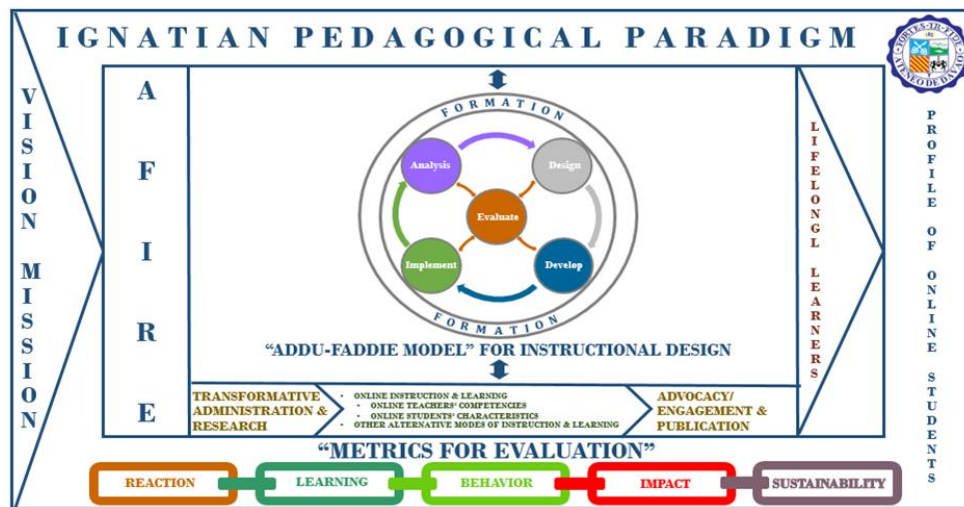


Fig. 1: Conceptual Framework for ADDU's Online Education

Thus, ACERA attempted to respond to these challenges and aimed to contribute to the realization of the Vision and Mission of the University through research which will eventually support the University's advocacy to benefit its stakeholders, partners in public and private institutions, and other communities especially the marginalized in Mindanao and beyond. Specifically, this study aimed to answer the following questions:

- A. What is AddU's framework for online education that is appropriate to the Vision and Mission, and Jesuit values of the University?
- B. As a result of the pandemic and the new normal, how will AddU create its model of instructional design that incorporates IPP as an overarching framework, with ADDIE as a design model, and that covers not just academic instruction but also value formation?
- C. What metrics for evaluation should be considered to measure AddU's model for instruction that is conducted online?

2. Methodology

This study made use of developmental research. Developmental research, as opposed to simple instructional development, has been defined as the systematic study of designing, developing, and evaluating instructional programs, processes, and products that must meet criteria of internal consistency and effectiveness [32]. However, in this research, the study focused on designing and developing a model for instructional design of the University. The evaluation of the model shall be done after its implementation. Minutes during the first organizational meeting attended by nineteen (19) co-founders and a founder was considered as main data sources. The data were analyzed following the thematic analysis and formed part in the designing and developing a framework for the University online education. A committee of five (5) and one secretary was also formed and approved by the founder of ACERA who is also the University President to discuss further the complementation of ADDIE and formation with IPP, as overarching framework for the University's model for online education.

3. Results

This section provided the results and discussions that are based on the research questions. The analysis are derived from messages of the founder and co-founders of ACERA during its first organizational meeting. Five (5) major themes for an online pedagogy emerged and these are: teachers' competencies and strategies teaching online, preparation of instructional materials, agency of the student, formation in an online platform of instruction, and

student assessment and learning outcomes. Other themes included profiling of an online student and the characteristics of an online student, quality assurance of the program via online platform of education, distance education practices, learning development and training development programs for non-degree professions/professional, ADDU’s advocacy to help other institutions for their online and distance education platforms, status of local and Philippine schools via online education, designing curricula for physical education and for children with special needs in an online platform, and the University’s response to industries to stimulate economy via work from home strategy. These themes have helped the research in formulating the general framework of ADDU online education, considerations of IPP and ADDIE which complements with formation, and the metrics for evaluation to measure ADDU’s model for instruction via online.

3.1 The General Framework of ADDU Online Pedagogy/Education

Using systems thinking or systems theory by [33] as a discipline to help articulate the online platform of instruction in the University, as shown in Figure 2, it is important for ACERA to identify predictors of and determinants of success of the University’s shift from face to face to online instruction. Amid the challenges brought about by the COVID-19 pandemic and the notion that today is a generation dominated by the generation alpha – the new normal generation who are the digital natives, ACERA underscores the role of leadership that will help transform the mindset of the key players, the teachers who are the frontliners in the area of instruction via online platform. This transformative leadership will play its roles in bridging generational differences, that is, the differences between generation alpha or new normal generation and their predecessors. Being mindful of managing change, stakeholders shall keep upholding the tradition of academic excellence; hence, in the perspectives of organizational development (OD), this transformation can be reinforced by the impacts of teamwork, coaching and mentoring, and feedbacking.

This framework highlights the ADDU IPP-ADDIE model for instructional design that complements with formation. Such framework is approved by the University President for an effective and successful implementation of the University’s online education. In the context of research and advocacy, ACERA articulates that a core team which will involve experts in the instructional designs is central to the attainment of its goals that will contribute to the body of knowledge and eventually support good practices in online platform of instruction. With solid research undertakings, ACERA will continue to contribute to the University’s advocacy in the aid of policy formulation and legislation within the University community and beyond.

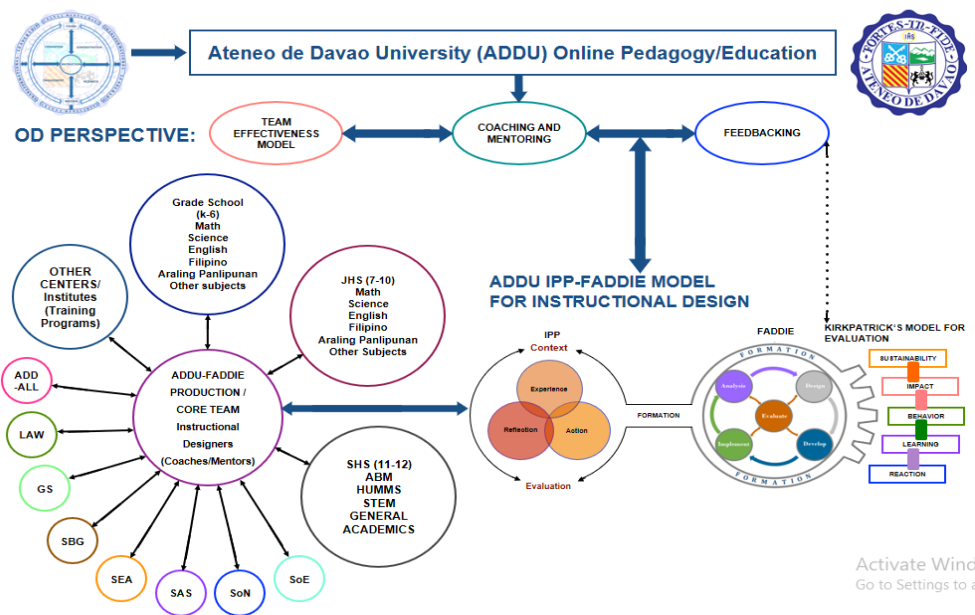


Fig. 2: General Framework of ADDU Online Pedagogy/Education

3.2. Considerations of IPP as an overarching framework and ADDIE model which complements with formation

A. C/A (Context/Analysis): Using ADDIE as an instructional design, it supports the context following IPP key teaching elements. The data which will be achieved employing *A (Analyze)* of ADDIE will strongly establish the *Context* that will help the instructional designer or teacher prepare to teach the learners well. The *A* of ADDIE provides *evaluation* to ensure enhancement of the use of the model that supports the *Context as one key dimension of IPP*.

B. DDI (Design Development Implementation) of ADDIE provides support to ERA (Experience Reflection Action) as key dimensions of IPP to *engage learners as whole persons* in the teaching-learning process via online. The details or indicators provided by the DDI (Design Development Implementation) of ADDIE will help sustain the teaching-learning process of “educating the whole persons” of the students. Jesuit education with the VMG and the AFIRE as guiding principles of the University, the philosophy behind the importance of the learning outcomes, the 21st century leadership particularly the *ADDU sui generis*, and the teaching-learning process that will prepare the graduates as lifelong learners may be achieved with the support of DDI of ADDIE.

C. The DDI of ADDIE will help ERA of IPP form the students not only in the aspect of cognitive but as “whole persons.” The profile of an ideal ADDU graduate will be realized when DDI and ERA are combined or put together. Influenced by the IPP, ADDIE becomes an opportunity for an instructional designer or teacher to integrate formation in “educating the whole persons” in the teaching-learning process in an online platform of instruction. Formation such as integrating competence, conscience, compassion and commitment (4Cs) and Ignatian values when teaching the discipline like Math, Physics, Social Sciences, Education, Business, Arts and Humanities, Health Sciences, Engineering, etc. across curricula must be present or experienced in the course of actual instruction via online, i.e., (or the I- Implement of ADDIE).

D. DDI of ADDIE will encourage the instructional designer or teacher to evaluate the DDI experiences and ensure success on the use of DDI of ADDIE that is supportive of ERA of IPP. In designing the course, the instructional designer or teacher *must be informed*, that *formation* is an integral part in the teaching-learning process, making sure that learners engaged as “whole persons” in the actual implementation of online education. DDI of ADDIE will support IPP in its desire to provide activities or questions designed for students to have thoughtful reconsideration of some subject matter, experience, idea, purpose or spontaneous reaction, in order to *grasp its significance more fully* and initiate ways to compel learners *to move beyond knowledge to action*. DDI of ADDIE provide evaluation in each of the DDI to ensure enhancement in the implementation of ADDIE supportive of the key teaching elements of IPP.

E. E (Evaluate) of ADDIE helps as well Evaluation (as key element of IPP), the science of or rudiments in assessing/evaluating learners’ growth in mind, heart, and spirit.

In the course of interaction, the faculty across the levels in the University should be mindful of the four types of interaction every online class should have: student-to-student interaction, student-to-instructor interaction, student-to-content interaction, and student-to-self-interaction.

3.3. Metrics for Evaluation to Measure ADDU’s Model for Instruction and Learning via Online

Following the tree diagram by [34] and the Venn diagram by [35] to analyze the interactions of key elements and indicators among the three (3) key factors such as IPP, ADDIE model which complements with formation for instructional designs, and Kirkpatrick model of evaluation, ACERA shall be guided in evaluating the University’s online education. Further, the center shall also be guided in identifying research areas to improve the practices and create intervention programs for online education across levels of education and disciplines, including but not limited to, learning and development and training and development programs by the different schools and centers or institutes in the University.

This framework will serve as a guide to identify further researches that are relevant for sustainable online education. The findings of any research undertaking will support the University in the formulation or reformulation of its policies which may eventually impact University’s commitment to stakeholders. The analytical framework, as shown in Figure 3, will also serve as a means to manage change efforts in terms of identifying resources and securing financial support for online education.

Given the framework, this could help the University monitor the progress of research activities and at the same time help identify further research problems which might be considered for implementation. The framework shall likewise assist ACERA’s strategy in validating outcomes of researches supportive of the University Vision and Mission.

ADDIE Model complementary with Formation (FADDIE) Ignatian Pedagogical Paradigm		Kirkpatrick Model for Evaluation				
		Reaction (Level 1) How did learners and teachers feel about the course? Were they satisfied with the experience?	Learning (Level 2) Did the individual components of the course achieve the desired learning outcomes?	Behavior (Level 3) Did the experience in the course change the learners’ behavior? Did it affect the way they approached learning in subsequent online courses?	Results/ Impact (Level 4) What were the measurable outcomes? Did the learners benefit from the course? Could they carry their learning forward into future courses and activities?	Sustainability/ ROI (Level 5) When you consider the costs associated with creating and running the course, were these more or less than the value of the course to your program?
Context: What needs to be known about learners (their environment, background, community, and potential) to teach them well?	Analyze Analyze: your student population, overall goals for the students, amount and level of content needed for the course and course level, resources needed	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model
Experience: What is the best way to engage learners as whole persons in the teaching and learning process? Reflection: How may learners become more reflective so they more deeply understand what they have learned? Action: How do we compel learners to move beyond knowledge to action?	Design Design: a course outline, course templates, objectives for each week, activities for the course, discussions for the course, final project for the course, assessments for the course, syllabus for the course	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model
	Develop Develop: the course itself, set up the gradebook, link activities to the gradebook, set up a course calendar	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model
	Implement Implement: conduct the course, create announcements, send e-mails, grade students, provide feedback, and assess students	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model
Evaluation: How do we assess learners’ growth in mind, heart, and spirit?	Evaluate Evaluate: student results, evaluate student feedback, and plan revisions for the next term	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model	Key elements (indicators) of IPP and ADDIE Model

Fig. 3: Analytical Framework: Metrics for evaluation to measure ADDU’s Model for instruction conducted online

4. Conclusions

The following are conclusions of the study:

1. Identified five major themes for an online education which include teachers’ competencies and strategies teaching online, preparation of instructional materials, agency of the student, formation in an online platform of instruction, and student assessment and learning outcomes.
2. Developed framework for online education in considerations of IPP as an overarching framework and ADDIE model, which complements with formation. Such a framework articulates that a core team which will involve experts in the instructional designs is central to the attainment of its goals that will contribute to the body of knowledge and eventually support good practices in online platform of instruction.
3. Proposed metrics to measure and evaluate the effectiveness, impact, and sustainability of University’s platform of online instruction.

Acknowledgement

This research was not funded by any grant.

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