

## Instructional Design of Selected Senior High School Lesson Plans: A Multiple Case Study

April John F. Llorito<sup>1\*</sup>, Acelah H. Agnes<sup>2</sup>, Alexandra U. Tediong<sup>3</sup>, Aya L. Fadriago<sup>4</sup>,  
Brigitte L. Suanzon<sup>5</sup>, Charlene G. Galayugo<sup>6</sup>, Christine Anne M. Pascual<sup>7</sup>,  
Diadem Pearl F. Araneta<sup>8</sup>, Denrose Solis<sup>9</sup>, Edesa C. Pagdato<sup>10</sup>, Efren A. Savariz Jr.<sup>11</sup>,  
Elaine Rose V. Degala<sup>12</sup>, Imelda C. Bolaños<sup>13</sup>, Joan Santiago<sup>14</sup>,  
Kentz Daryl B. Reyes<sup>15</sup>, Lea T. Jaspe<sup>16</sup>, Merly R. Castillon<sup>17</sup>,  
Nyll Vincent C. Labordo<sup>18</sup>, Vary R. Pastor<sup>19</sup>, Rhexan Ira Marie P. Daza<sup>20</sup>,  
Rudy Wali<sup>21</sup>, Shirry F. Villaruel<sup>22</sup>, Teresa R. Laplana<sup>23</sup>, and Michael B. Cahapay<sup>24</sup>

<sup>1\*-23</sup>Notre Dame of Marbel University, Philippines

<sup>24</sup>Mindanao State University - General Santos, Philippines

<sup>1\*</sup>apriljohn.llorito@deped.gov.ph, <sup>2</sup>miss.acelah@gmail.com,

<sup>3</sup>alexandretediong9@gmail.com, <sup>4</sup>ayafadriago@gmail.com,

<sup>5</sup>brigitte\_suanzon@gmail.com, <sup>6</sup>cchay1287@gmail.com,

<sup>7</sup>christineanne.pascual7@gmail.com, <sup>8</sup>denrose.solis@deped.gov.ph,

<sup>9</sup>mutyafalle@gmail.com, <sup>10</sup>edesa.pagdato@deped.gov.ph,

<sup>11</sup>efren.savarizjr@deped.gov.ph, <sup>12</sup>elainerosedegala@gmail.com,

<sup>13</sup>imelda.bolanos001@deped.gov.ph, <sup>14</sup>santiagojoan0701@gmail.com,

<sup>15</sup>kentzreyes0320@gmail.com, <sup>16</sup>lea.jaspe@deped.gov.ph,

<sup>17</sup>merly.castillon@deped.gov.ph, <sup>18</sup>labordonyllvincent@gmail.com,

<sup>19</sup>varypastor@gmail.com, <sup>20</sup>rhexandaza@gmail.com, <sup>21</sup>walirudy02@gmail.com,

<sup>22</sup>shirryvillaruel@gmail.com, <sup>23</sup>teresa.laplana102815@yahoo.com.ph,

<sup>24</sup>mbcahapay@up.edu.ph

### Abstract

*One means by which the curriculum can be translated into relevant, appropriate, and responsive instruction is by using instructional design models. However, an issue in the current practice is whether this process of translation follows these certain instructional design models as guide. This study aimed to evaluate the underlying instructional design model of selected lesson plans. It followed a multiple case study research design to examine the instructional design models in the lesson plans through comparisons between several cases. Specifically, the researchers examined a total of 16 lesson plans which served as units of analysis in the four identified senior high school subjects. A tailored document evaluation guide was used as an instrument by the researchers who served as raters. The data were analyzed using thematic analysis as well as descriptive statistics such as frequency count and percentage rate. The results showed three themes across the cases: (1) there is an average of four to five instructional events, (2) there is one common instructional event which is the lesson presentation, and (3) there is no prevailing instructional design model. Thus, it can be concluded that the process of translation of the curriculum to instruction seemed not to follow any of the instructional design models. This study provides significance as regards the critical*

---

#### Article History:

Received (September 4, 2022), Review Result (October 11, 2022), Accepted (November 14, 2022)

*areas of instructional development of the teachers that need to be revisited for improvement. An important implication for teacher professional development is that instructional development, especially the use of instructional design models, should be stressed as an essential competency that must be further developed in the teachers.*

**Keywords:** *Instructional design, Lesson plan, Senior high school, Philippines*

## **1. Introduction**

Instructional designing is a systematic method of translating broad principles of learning into designs for instructional activities. It ought to ensure the quality of instruction by using an instructional model. Such a model outlines how to construct relevant pedagogical scenarios to achieve educational goals. It further explores how educational resources should be planned, created, and supplied to any learning group [1]. The instructional design model provides a technique for organizing educational experiences to aid the facilitation of effective learning through the systematic development of instructional elements [2].

Curriculum and Instruction design in the Philippines is a product of religious, economic, political, and social events that took place over a long period. The Philippines has a rich history of war and colonization, with religion and education as one factor of the conquest of various imperial powers, thereby affecting its educational landscapes. The Philippine curriculum commenced from the Pre-Spanish to the Philippine Republic Curriculum with a lot of social and political turmoil that transpired in the early 1980s and late 1990s such as martial law, impeachment trials, the Asian Financial Crisis, etc. The Philippine curriculum took a long time to develop, and up to this day, it is continuously evolving by introducing new frameworks and paradigms to better equip Filipino learners.

On May 15, 2013, Republic Act No. 10533 otherwise known as the Enhance Basic Education Act of 2013 was passed into law [3], mandating major curriculum and instructional changes. One of these changes is the addition of the senior high school which is two years of specialized upper secondary education. The choice of career track of the students at this level of their education will define the content of the subjects they will take with. It is espoused that the learner is at the center of the teaching-learning process. Thus, it advocates for instructional designs that are constructivist, inquiry-based, reflective, collaborative, differentiated, appropriate, relevant, and integrative.

However, a preliminary inspection of publicly available lesson plans raised a practical gap about whether they follow certain instructional design models. The researchers of this study speculated that since the upper secondary education curriculum has just been established, lesson plans may have been developed based on the experience of the teachers without intentionally defining its model. Another probable factor to such a problem may be the fact that there is still a shroud of obscurity in the collective practice of instructional design and teachers are urged to consult studies that report on trends in the field [4][5].

Synthesis of a sample of related studies [6][7][8][9][10][11][12] demonstrates how certain models assist teachers in designing instruction. However, in a curriculum that appears to have been translated into instruction without an agreed design model as a guide, there is a need to confirm if certain models underpin the organization of the events of instruction. Thus, further research to evaluate the written lesson plans in terms of the possible instructional design model that underlies them is warranted.

This study will be significant to the field of education by generally strengthening the instructional design in curriculum planning. Specifically, instructional designers and school

administrators may acquire practical insights that would help them evaluate instruction in schools. Through this study, teachers may likewise adopt helpful ideas that would better their instructional design practices. Lastly, it may open opportunities for researchers to further broaden studies in this area of interest.

Thus, considering the problem and significance established above, this study aimed to evaluate the underlying instructional design model of selected lesson plans. Specifically, it attempted to answer the following questions:

1. What is the average number of instructional events found across the lesson plans per subject?
2. What instructional events can be consistently identified across the lesson plans per subject?
3. What prevailing instructional design model is reflected across the lesson plans per subject?

## **2. Literature review**

The translation of the curriculum into instruction is a crucial phase. If it has to be done the logical and structured way, the teachers need to be consciously guided by instructional design models. Hence, this section reviews the literature on instructional design and its different models. Then, it discusses the curriculum of the senior high school in the Philippines to provide the context of the study. Towards the end, a synthesis of selected related studies is presented to demonstrate the gap which this current study is attempting to address.

### **2.1. Instructional design**

Instructional design is called a “science” for it adheres to a set of theories and procedures and is focused on information inputs and outputs, instruction design. Due to its connection to creativity and ability to display a designer's skills and aptitude, instruction design is also referred to as "art" [13]. It can be further defined as instructional design as a technique the teacher or designer employs as a resource that can be used to satisfy the demand for knowledge transfer [14].

Furthermore, instructional design is a methodical process of converting plans or specifications for instructional activities or materials into principles of learning and instruction [15]. Similarly, it is the methodical creation of instructional requirements employed to guarantee the effectiveness of training, use of learning, and instructional theory [16]. Instructional design is also the methodical and thoughtful process of developing plans for instructional materials, activities, information resources, and evaluation based on principles of learning and instruction [17].

Instructional design as a summary and for the current research is a systematic process of developing plans and application of plans through instructional activities as well as instructional materials that can be essential to the teaching strategies of the teachers and the learning of the students. It is also a process of applying theories to the learning practices and aids the teachers in catering to the student’s needs.

There are many existing instructional models. However, the following are the three selected instructional design models included in this review for they focus on designing the events of instruction which is the main interest of this study.

### **2.2.1. Nine events of instruction model by Robert Gagne**

This instructional design model is founded not only on behaviorist principles but also on cognitive theories and the theory of information processing [18]. It consists of nine events of instruction, conditions for learning, and taxonomy of learning outcomes [19]. Gagne suggested nine events of instruction that may enhance student learning: gain attention, inform learners of objectives, stimulate recall of prior learning, present stimulus, provide learner guidance, elicit performance, provide feedback, assess performance, and enhance retention and transfer [20]. The author hypothesized that the use of these nine events would facilitate student engagement and thereby enhance student learning, thus improving the overall understanding of course concepts [20].

The nine events of instruction can aid teachers to create a framework for planning and delivering instructional material while taking into account and correcting conditions for learning will enable us to attain the best possible learning outcomes. These instructional events also demonstrate a methodical approach to teaching, as it was evident that the teacher began by grabbing the attention of the class and ensuring that they were prepared to learn and take part in the exercises and discussions the teacher had planned for them [21]. Additionally, it is the responsibility of the teacher to encourage deep learning by clearly expressing lesson goals, using them as a guide for instructional design, and matching learning activities to lesson objectives [21].

### **2.1.2. Instructional theory into practice model by Madeline Hunter**

This instructional design model consists of seven steps that move the teacher and student through the process of learning, practicing, and evaluating the material to confirm mastery. These steps are anticipatory set; stated objective; instructional input; modeling; check for understanding; guided practice, independent practice, and closure. The concept is based on learning theory from numerous educational experts as well as psychological aspects [22].

This model aims to support the instructional decisions made by each teacher into meaningful classroom practices by putting “theory into practice” [23]. Additionally, the standard steps were created specifically so that students would complete the task correctly the first time [24]. These steps of lesson planning are based on learning concepts. Specifically, those concepts help in judging the success of direct instruction and determining what is required if lessons are unsuccessful [25].

### **2.1.3. 5Es learning cycle model by Rodger Bybee**

This model is a constructivist instructional design model. It consists of the following phases: engagement, exploration, explanation, elaboration, and evaluation. Each phase has a certain function and contributes to a coherent instruction of the teacher and a better understanding of the scientific and technological knowledge, attitudes, and skills of the students. The 5Es model has been used to help frame the sequence and organization of programs, units, and lessons. Once internalized, it also can inform the many instantaneous decisions science teachers must make in classroom situations [26].

The 5Es model is a planning tool for inquiry teaching that provides a structure for students to connect science ideas with their experiences and apply their learning to new contexts. When used as the foundation for a single session, the individual phases of the model are less successful [26]. Moreover, the 5Es Model unifies many teaching approaches, creates linkages between educational activities, and aids science teachers in choosing how to interact with

students. Additionally, compared to traditional teaching approaches, the 5Es model is more effective and yields positive results [27].

## **2.2. Curriculum of the senior high school in the Philippines**

The Philippines administered the Enhanced Basic Education Act, or Republic Act 10533, or the K to 12 programs that covers Kindergarten and 12 years of basic education in 2012. The Philippines was the only remaining country in Asia with a 10-year basic education cycle [3]. Along with Angola and Djibouti, the country used to be one of the only three remaining countries in the world with a 10-year pre-university curriculum.

One of the structures of the K to 12 is the Senior High School (SHS) program which aims to shape learners with the necessary skills to prepare them for forthcoming tracks in Employment, Entrepreneurship, Higher Education, or Middle-Level Skills Development [28]. As a specialized upper secondary education, students enrolling in Senior High School may select a specialization based on their ability and interests.

There are four specific tracks available in SHS: Academic; Technical Vocational-Livelihood (TVL); Arts and Design; and Sports. Under the Academic track, there are strands from which students can choose; these are Accountancy, Business and Management (ABM); Humanities and Social Sciences (HUMSS); Science, Technology, Engineering, and Mathematics (STEM); General Academic Strand (GAS); and Pre-Baccalaureate Maritime. The TVL track includes Home Economics (HE); Information and Communications Technology (ICT); Agri-Fishery Arts; and Industrial Arts [28].

The Senior High School Curriculum could be categorized into Core Subjects, Applied Track Subjects, and Specialized Track Subjects. Other than Core Subjects, all SHS students will be taking similar Applied Track subjects in consideration of their area of specialization. Applied Track Subjects develop the same competencies using different content based on their chosen track or strand [28].

The quantity of Core and Applied Subjects in the Senior High School curriculum may be similar to the present General Education Curriculum, but the subject description and content have been changed. The College Readiness Standards (CRS) served as a fractional basis for forming the curricula for Grades 11 and 12 [29]. The CRS outlines the standards a student must meet before entering tertiary education. CHED adopted the CRS through the Commission En Banc Resolution No. 298-2011.

Higher educational organizations are still permitted to add courses aside from the 36-unit minimum requirements, provided the courses are liberal education and are not introductory disciplinary courses. CHED also restates that remedial courses "have no place" in General Education in tertiary education. It would be the school's accountability to provide bridge courses without credit or prerequisites to the General Education if the learner still requires remediation [29].

## **2.3. Evaluation of the instructional design model in senior high school curriculum**

Several scholars have investigated instructional design as an essential process to unpack the curriculum. A sample of these studies by scholars is described as follows.

Chukwuemeka et.al (2020) areas of primary importance and focus of the instructional design model include the efficient creation and delivery of teaching, patterns for the creation of lesson content, and media choice. In addition, it also focuses on the promotion of efficient teaching and learning activities inside the classroom [6].

Wongwaengnoi et.al (2018) instructional model served as a guide to assist instructors in creating courses on teachers' competencies that improve the possibilities of teaching and learning and foster student teachers' participation [7]. The results showed that the model was appropriate for training student instructors through activities, tasks, quizzes, and presentations of particular assignments which is also similar to the study of Puangtong (2014) that the instructional design model could use assignments and some activities to assist students in creating knowledge [8].

D'Angelo et.al (2018) used an instructional design model to help learners acquire a structured approach to encourage learning and academic success. It is also utilized to have efficient individualized learning [9]. Moreover, Bajbouj et.al (2015) study on instructional design models emphasizes the learners rather than the teacher. Therefore, it focuses on what the learners learn by combining newly learned information with what they already knew, thus this is made up of five generic processes, and it employs a statistical method to determine which of the possible best ways to communicate learning concepts to students of various levels of expertise should be used [10].

Aytekin's (2011) main goal of instructional design is to plan comprehensive, long-term learning activities. The behaviorism, cognitivist, and constructivism theoretical foundations serve as the basis for this model where learners actively participate in teaching and learning activities and build new knowledge using cognitive, constructivist, or behaviorist learning strategies [11]. Khalil and Elkhider's (2016) goal is to utilize the instructional design model to achieve effective learning outcomes and be a guide in the creation of instructional design techniques that stimulate the proper cognitive processes. In addition, learning theories are described, along with a few specific instances of instructional design models [12].

It can be deduced from the related studies reviewed that instructional design models are utilized to assist teachers in creating lesson plans. However, while these related studies assume that lesson plans are based on instructional design models, there is still a need to confirm this assumption. This current study intended to address this need by evaluating a sample of lesson plans in selected subjects.

### 3. Conceptual framework

This study is based on a conceptual framework that was synthesized from the review of relevant literature. It has three major components as shown and described as follows.

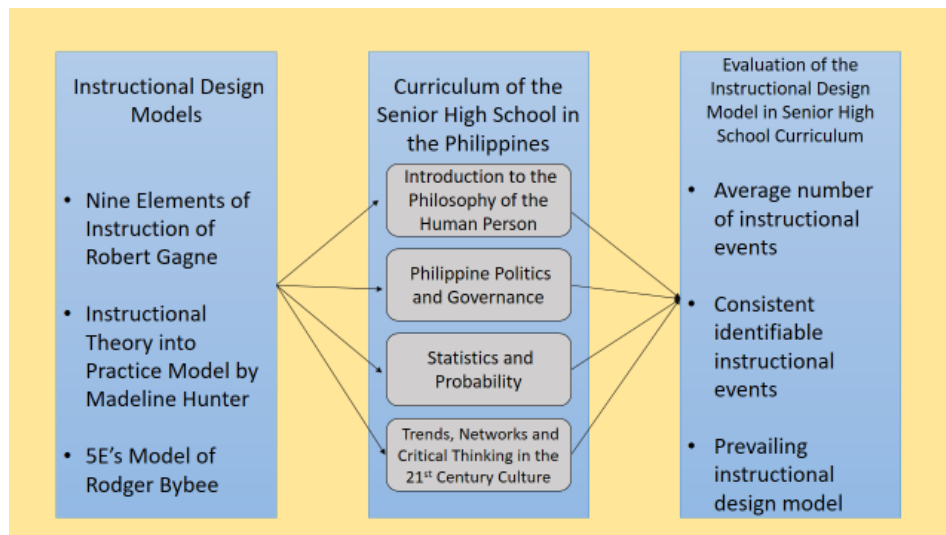


Figure 1. Conceptual framework of the study

The first component consists of the instructional design models that focus on designing the events of instruction. They serve as the conceptual foundation from which the selected curriculum will be evaluated. The second component shows the senior high school curriculum with the selected subjects. It provides the instructional context from which the purpose of the study would be achieved. Lastly, considering the conceptual foundation and instructional context, the third component is the evaluation of the instructional design model in the selected senior high school lesson plans. It further articulates the three main focuses of the evaluation undertaken in this research.

## **4. Methods**

### **4.1. Research design**

A case study can be defined as an intensive study about a person, a group of people, or a unit, which is aimed to generalize over several units. With a case study, the focus is based on a special unit [30]. It is not aimed to analyze cases, but it is a way to define cases and explore a setting to understand them [31]. This research design is appropriate when the purpose is to gain concrete, contextual, in-depth knowledge about a specific real-world subject allowing for the exploration of the key characteristics, meanings, and implications of the case.

Specifically, this present research used a multiple case study as a research design. This particular research design examines numerous bounded cases. Importantly, it enables researchers to assess a phenomenon from several aspects and strives to evaluate a case through comparisons between several cases [32]. This design was deemed appropriate for the current research. The phenomenon considered in this study was the instructional design model of selected lesson plans evaluated through comparison of several instrumental cases which are the selected subject areas in the senior high school. It provided a structure from which the phenomenon can be studied from the lens of multiple cases, ensuring methodical rigor and outcome validity.

### **4.2. Unit of analysis**

Four cases, which are school subjects, were considered in this study as follows: Case A: Introduction to the Philosophy of a Human Person, Case B: Statistics and Probability, Case C: Politics and Governance, and Case D: Trends, Networks and Critical Thinking in the 21st Century Culture. They were selected for representativeness; the first two are core subjects and the last two are specialized subjects. They are currently offered in the DepEd senior high school curriculum.

Related studies [33][34] do not indicate the standard number of lesson plans per subject for evaluation research. The researchers evaluated a one-week instructional unit or equivalent to four lesson plans per subject for a total of 16 lesson plans. This number does not represent all the lesson plans but is considered adequate for this study to evaluate the instructional design of selected senior high school lesson plans.

### **4.3. Research instrument**

The researchers used a document evaluation guide as an instrument to gather the needed data. It was employed to evaluate the instructional events of the sample senior high school lesson plans and eventually determine whether the events of instruction in the sample lesson plan follow a certain instructional design model.

The development of the document evaluation guide included initially creating an empirical framework that served as the basis for the items. Then, pooling of the items from the relevant literature followed. A total of 22 items were drawn from the events of instruction of relevant instructional design models of Gagne [18], Hunter [22], and Bybee [26]. These models were included as they focus on designing the events of instruction which is the main interest of this study.

Lastly, as a tailored qualitative instrument done by the researchers, dependability and credibility measures undertaken to develop the document evaluation guide were initial review of the items by a content expert to assess the fidelity of the items and pilot usage by the researchers to test the items and refine them as needed.

### **4.4. Data collection**

The data collection of this study commenced with the online search of relevant units of analysis. Sixteen (16) lesson plans in the four (4) identified subjects of DepEd senior high school publicly accessible online were downloaded. These lesson plans were distributed to the assigned research teams for analysis.

Within each research team, three members independently evaluated the lesson plans using the evaluation guide. Then, the three members discussed their ratings. Any divergence was consensually resolved until an acceptable interrater agreement was reached. This measure ensured the reliability of the qualitative data collection process.

After the evaluation of the lesson plans, the data were collected and subjected to the first stage of data analysis to generate the themes within each case. The data from this stage were further collected and subjected to the second stage of data analysis across cases.

### **4.5. Data analysis**

This study initially employed a content analysis technique for data analysis. It is a research method used to identify patterns in recorded communication [35]. Additionally, content analysis is described as a way to quantify the frequency of specific words, phrases, topics, or concepts in a collection of historical or modern writings [35]. It can be used to interpret texts for the development of expert systems [36].

Thematic analysis was also employed in this study. It is a data analysis technique that involves reading through a data set and identifying patterns in meaning across the data to derive themes. Thematic analysis is also a flexible approach to qualitative analysis that enables researchers to generate new insights and concepts derived from data [37]. It is an approach when dealing with people's views, opinions, knowledge, experiences, or values from a set of qualitative data [38]. Additionally, descriptive statistics like frequency count and percentage rate were used to quantitatively analyze the data.

This multiple case study adopted the data presentation framework proposed by Creswell [39]. This framework was adopted for it is relevant to the research design of this study. Following the format, the researchers first give a thorough description of each case and themes within each case, referred to as a "within-case analysis", then conduct a thematic



analysis across cases, referred to as a "cross-case analysis" and make assertions or interpret the significance of the case.

## 5. Results and discussion

This paper aimed to evaluate the underlying instructional design model of selected lesson plans. The results are presented by case as follows. Within each case, the context and themes are discussed. The results and discussion for the cross case analysis are presented towards the end.

### 5.1. Case A: Introduction to the philosophy of the human person

#### 5.1.1. Case context

Introduction to Philosophy of the Human Person is one of the core subjects in the Senior High School program of the K to 12 Curriculum of the Department of Education. It is an initiation to the activity and process of philosophical reflection as a search for a synoptic vision of life. It covers the topics of human experiences of embodiment, being in the world with others and the environment, freedom, intersubjectivity, sociality, and being unto death.

This subject will enable the learners to (a) reflect on their daily experiences from a holistic point of view, (b) acquire critical and analytical thinking skills, (c) apply their critical and analytical thinking skills to the affairs of daily life, (d) become truthful, environment-friendly and service-oriented, (e) actively committed to the development of a more humane society, and (f) articulate their philosophy of life.

#### 5.1.2. Case themes

**Theme 1: Average of four instructional events.** Based on the quantitative content analysis across four lesson plans in Introduction to the Philosophy of the Human Person, an average of 4 instructional events was found. However, this average number is not reflected across the lesson plans when looking at them individually; some have lower numbers and others have a higher number of instruction events.

Specifically, Lesson Plan 1 has three identified instructional events such as motivation, lesson presentation, and independent practice; Lesson Plan 2 has three identified instructional events such as review, lesson presentation, and independent practice; Lesson Plan 3 and Lesson Plan 4 both have four identified instructional events such as motivation, review, lesson presentation, and independent practice.

**Theme 2: Lesson presentation and independent practice.** Based on the analysis of the lesson plan, there were only two instructional events consistently identified across four lesson plans. These are instructional events related to lesson presentation and independent practice.

Events in lesson presentation included asking learners what their ideas on philosophy are and unlocking difficulties (Lesson Plan 1), reading a text related to philosophy and unlocking difficulties (Lesson Plan 2), presentation of the different views of philosophers about the integrated view of the world (Lesson Plan 3) and discussion of philosophy as a journey (Lesson Plan 4).

Instructional events on independent practice across the lesson plans focused on group activities performed by students such as creating a word web about philosophy (Lesson Plan 1), comparing and contrasting philosophy as a process and as a concept (Lesson Plan 2), and

creating a tableau, slogan or a short poem (Lesson Plan 3), and essay writing about philosophy (Lesson Plan 4).

**Theme 3: No prevailing instructional design model.** The inspection further revealed no prevailing instructional design model reflective across the lesson plans. While the identified instructional events may have equivalent instructional events in the different instructional design models, e.g., lesson presentation to present stimulus in the model of Gagne [20] or instructional input in the model of Hunter [23], and independent practice corresponding to elicit performance in the model of Gagne [20] or independent practice in the model of Hunter [23], however, the lesson plans lack several other instructional events of any these instructional design models

## 5.2. Case B: Statistics and Probability

### 5.2.1. Case context

Statistics and Probability deals with data, its significance has been acknowledged by governments, the business sector, and academic fields alike due to the demand for decision-making that is supported by evidence. Since more and more data is being gathered, kept, analyzed, and reanalyzed during the last few years, its significance has increased (CHED). For that reason, it is one of the core subjects in the K-12 curriculum.

Its goal is for students to (a) understand and calculate the mean and variance of a random variable, (b) apply sampling techniques and distributions, (c) estimate population mean and proportion, and (d) perform hypothesis testing on the population mean and proportion, and (e) perform correlation and regression analyses on real-world problems.

### 5.2.2. Case themes

**Theme 1: Average of five instructional events.** Based on the content analysis of the Statistics and Probability four-lesson plan and the three raters' evaluations, the results show that the Statistics and Probability lesson plan followed an average of five instructional events.

According to the findings, Lesson Plan 1 has only two instructional events which are the review and lesson presentation. On the other hand, Lesson Plan 2, Lesson Plan 3, and Lesson Plan 4 all exhibited five instructional events which are review, presenting stimulus, lesson presentation, responding, and assessing performance.

**Theme 2: Review and lesson presentation.** According to the content analysis, there are only two consistently common instructional events that can be identified across the four lesson plans. These instructional events are the review and the lesson presentation.

Although the four lesson plans have an average of five instructional events, it can be significantly noted that Lesson Plan 1 lacks all instructional events except the two mentioned instructional events, which is why it is the only identified instructional event across the four lesson plans.

**Theme 3: No prevailing instructional design model.** The researchers discovered that the lesson plans did not follow any instructional design model. Although Lesson Plan 2, Lesson Plan 3, and Lesson Plan 4 appeared to have instructional events mostly corresponding to the three instructional events of the model of Bybee [26], which are the explore, elaborate, and evaluate, however, Lesson Plan 1 did not have any of these corresponding instructional events.

### 5.3. Case C: Philippine politics and governance

#### 5.3.1. Case context

Philippine Politics and Governance is a subject offered in the Senior High School program of the K to 12 Curriculum of the Department of Education. It serves as a primer for the study of the state, its inception, and its constituent parts.

The political history of the Philippines—from the time of the Barangays to the era of colonization, the fight for independence, the Commonwealth, and finally the establishment of the Republic—is at the center of the subject. Furthermore, it compares and contrasts the fundamental clauses of the numerous Philippine constitutions as it explores the current organization of the government.

#### 5.3.2. Case themes

**Theme 1: Average of four instructional events.** Based on the quantitative content analysis across four lesson plans in this subject, an average of 2 instructional events were found. However, this average number is not reflected across the lesson plans when looking at them individually; some have lower numbers and others have a higher number of instructional events.

The results of the evaluation of the raters showed that Lesson Plan 1 has three identifiable instructional events such as motivation, lesson presentation, and practice; Lesson Plan 2 has four identifiable instructional events such as motivation, lesson proper, review, and practice; Lesson Plan 3 has three identifiable instructional events such as lesson proper, review and practice; and Lesson Plan 4 has four identifiable instructional events such as motivation, review, lesson presentation, and practice.

**Theme 2: Lesson presentation and practice.** Based on the analysis of the lesson plan, there were 2 instructional events identified across four lesson plans. These are events related to lesson presentation and practice.

Instructional events related to lesson presentation on Lesson Plan 1 was a discussion about politics; Lesson Plan 2 was a discussion of concepts on politics; Lesson Plan 3 and Lesson Plan 4 was a discussion of the topic with the aid of media presentation. Furthermore, the instructional event related to practice on Lesson Plan 1 was a group work in which students explain the political concepts in a song; Lesson Plan 2 was a group work in which students answered a question on the manila paper; Lesson Plan 3 was role-playing; and Lesson Plan 4 was a symposium.

**Theme 3: No prevailing instructional design model.** After a thorough evaluation, there was no prevailing instructional design model reflected in the evaluated lesson plans. While the identified instructional events of the lesson plans may have equivalents in other instructional design models, e.g., lesson presentation corresponding to present stimulus and practice corresponding to provide learner guidance in the model of Gagne [20], they notably lack the number of instructional events that are identified to such model and other models.

## 5.4. Case D: Trends, networks, and critical thinking of the 21st century

### 5.4.1. Case context

Trends, Networks, and Critical Thinking of the 21st Century is one of the specialized subjects in the Senior High School program of the K to 12 Curriculum of the Department of Education. It provides opportunities for students to discover patterns and extract meanings from emerging trends. It aids in developing their critical and creative thinking skills - essential tools for decision-making and understanding “ethics of care”.

Global trends in the 21st century are examined and are either accepted or rejected on a sound set of criteria. Students will be asked to create and analyze scenarios that will challenge them to (a) formulate their stances on issues or concerns; (b) propose interventions; and (c) formulate alternative futures. The students will realize the interconnections between their neural connections and social realities.

### 5.4.1. Case themes

**Theme 1. Average of four instructional events.** As found in the quantitative content analysis, an average of five instructional events were found across the four lesson plans. However, this average number is not reflected across the lesson plans when looking at them individually; most have the same number of instructional events

As evaluated, lesson plan 4 has four identifiable instructional events (Review, motivation, lesson presentation, assessment)

**Theme 2. Review, motivation, lesson presentation, and assessment.** Based on the analysis of the lesson plans, there were instructional events that were recurrently identified across the four units evaluated. These instructional events appear to be related to review, motivation, lesson presentation, and assessment.

An instructional event where the teacher piques the interests of the students by asking a provoking question about the effects of globalization (Lesson Plan 1), showing the effects of globalization through picture analysis, and posting a world map on the board (Lesson Plan 2), showing video presentation about the effects of globalization in labor and migration, then the presentation where the process in inferring questions (Lesson Plan 3), showing a picture of UN members in an assembly and asking a question the picture posted (Lesson Plan 4) is arousing learners’ interest through putting together the puzzle showing the connection of the people and the nation.

The content analysis showed two common instructional events in the four lesson plans. These instructional events are related to motivation and lesson presentation. Though retrieval or review is presented, it is not elaborated in the lesson planning and it is not well-associated with what learners held to the new topic. Further, in the event of expectancy or stating learning objectives, Lessons 1 and 3 state the objectives of the day during establishing a purpose for the lesson. The lesson 2 and 4 objectives are not evidently elaborated in the lesson plan.

**Theme 3. No Prevailing instructional design model.** Lastly, the evaluation revealed no prevailing instructional design model reflective of the lesson plans. The identified instructional events of the lesson plans seemed to mostly refer to the instructional events of the model of Gagne [20] such as review to retrieval; motivation to attention, lesson presentation to selective perception; and assessment to retrieval of learning. While several instructional events of this model may be presented in the lesson plans, other essential

instructional events of the same model such as semantic encoding, responding, reinforcement, and selective perception cannot be consistently found.

### 5.5. Cross-case analysis

Table 1. Themes across cases

Theme	Case			
	Case A: Philosophy of the Human Person	Case B: Statistics and Probability	Case C: Philippine Politics and Governance	Case D: Trends, Networks, and Critical Thinking
Theme 1	Average of four instructional events	Average of five instructional events	Average of four instructional events	Average of four instructional events
Theme 2	Lesson presentation and independent practice	Review and lesson presentation	Lesson presentation and practice	Review, motivation, lesson presentation, and assessment
Theme 3	No prevailing instructional design model	No prevailing instructional design model	No prevailing instructional design model	No prevailing instructional design model

Firstly, based on the analysis across the four cases, an average of four to five instructional events were found in the lesson plans. This result provides a glimpse into the quantity of instructional events across the lessons per subject. There is no exact and hard rule regarding the number of instructional events in a lesson plan for teaching and learning to be effective. For example, the model of Gagne has nine [20] while the model of Bybee has five [26], but there is no argument as regards their respective effectiveness in designing instruction.

Based further on the examination of the four cases, there was one instructional event that is common across the lesson plans. This instructional event is related to lesson presentation. This outcome implies that while the presentation of the lesson seems a vital instructional event to the teachers, however, relying on such an instructional event alone may not assure a complete learning cycle. The extant models [20][23][26] of instructional design assume that while some instructional events may be altered, combined, or removed [40], however, it can be observed they commonly agree that learning occurs in a certain pattern of multiple instructional events.

Lastly, from the collated results across the four cases, it was revealed that there is no prevailing instructional design model across the lesson plans of the four subjects evaluated. Instructional design models intend to provide a means of organizing pedagogical scenarios [1] to aid the facilitation of effective learning through the systematic development of instructional elements [2]. Thus, in the absence of such models as a guide or underlying pattern for designing instruction, it can be questioned if instructional events were organized in a way that mirrors how teaching should take place to affect learning.

## 6. Conclusion

The effective instructional designing process is a contributory factor to successful student learning outcomes. This multiple case study evaluated the instructional design model present in the senior high school lesson plans across four selected subjects. The results of the integrated analysis of four cases showed three themes: (1) there is an average of four to five instructional events. Although this finding may vary from one lesson plan to the next, it was discovered that the identified instructional events of the lesson plans primarily seemed to refer to the instructional events of the Gagne model, such as review to retrieval, motivation to

attention, lesson presentation to selective perception, and assessment to retrieval of learning. (2) There is one common instructional event which is the lesson presentation. This revealed the importance of lesson presentation in instructional events; however, sole reliance on such an instructional event may not ensure a complete learning cycle. (3) There is no prevailing instructional design model. When used as a guide or underlying pattern for constructing instruction, instructional design models can be thought of as a tool to assist effective learning. Without them, it is possible to wonder if a lesson plan actually aids learning for students. These research outcomes offer insights into the possible gaps in the written lesson plans.

This study provides vital instructional recommendations in light of the above results. There is a need to revisit how the curriculum is translated into the instruction of which the products are some of the lesson plans that were evaluated in this study. Moreover, instructional design may be stressed as an essential competency that must be included in the professional development activities of the teachers. The major limitations of this study rest on the small unit of analysis covered in the evaluation and the single method used to analyze the lesson plans. Thus, future researchers are encouraged to replicate this study using a larger number of lesson plans and evaluate them using other data analysis techniques.

## References

- [1] A. Kurt, "Instructional design models and theories," *Performance Improvement Quarterly*, vol.30, no.3, pp.199-219, (2021)
- [2] E. Branch, C. B. Brandt, K. Cennamo, S. Douglas, M. Vernon, M. McGrath, and Y. Reimer, "A theoretical framework for the studio as a learning environment." *International Journal of Technology and Design Education*, vol.23, pp.329-348, (2014)
- [3] Official Gazette, "The K to 12 basic education program," <https://www.officialgazette.gov.ph/k-12/>. (2013)
- [4] I. E. Allen and J. Seaman, "Online report card: Tracking online education in the United States," Babson Survey Research Group, (2016)
- [5] M. C. Kim, M. J. Hannafin, and L. A. Bryan, "Technology-enhanced inquiry tools in science education: An emerging pedagogical framework for classroom practice," *Science Education*, vol.91, no.6, pp.1010-1030, (2007)
- [6] C. E. Joshua, B. A. Eytayo, A. A. Hammed, and D. Samaila, "A review of instructional models for effective teacher education and technology integration," *Sumerianz Journal of Education, Linguistics and Literature*, vol.3, no.6, pp.86-95, (2020)
- [7] T. Khumyoo, S. Wongwangnoi, and S. Phaudjantu, "A development of an instructional model based on model of the development of the teachers' competencies for Thailand 4.0 for student teachers," *International Conference on Innovation, Smart Culture and Well-Being*, (2018)
- [8] P. Puangtong, "The development of instructional model integrated with thinking skills and knowledge constructivism for undergraduate students," *Procedia-Social and Behavioral Sciences*, vol.116, pp.4283-4286, (2014) DOI: 10.1016/j.sbspro.2014.01.932
- [9] T. D'Angelo, J. C. Bunch and A. Thoron, "Instructional design using the Dick and Carey system approach," IFAS Extension, University of Florida, (2018)
- [10] M. Bajbouj, N. H. M. Alwi and N. F. M. N. Shah, "A systematic development of instructional design for programming languages: A constructivist based instructional design approach," *International Conference on Computer, Communications, and Control Technology, Malaysia*, (2015) DOI: 10.1109/I4CT.2015.7219636
- [11] I. Aytakin, "Instructional design in education: New model," *The Turkish Online Journal of Educational Technology*, vol.10, no.1, pp.136-142, (2011)

- [12] M. K. Khalil and I. A. Elkhider, "Applying learning theories and instructional design models for effective instruction," *Advances in Physiology Education*, vol.40, no.1, pp.147-156, (2015) DOI:10.1152/advan.00138.2015
- [13] G. M. Piskurich, "What is this instructional design stuff anyway?" John Willey and Sons, USA. (2006)
- [14] P. L. Hardre and C. Chen, "A case study analysis of the role of instructional design in the development of teaching expertise," *Performance Improvement Quarterly*, vol.18, no.1, pp.34, (2005)
- [15] M. G. Moore and G. Kearsley, "Distance education: A systems view," Wadsworth, Belmont, (2004)
- [16] A. H. Brown and T. D. Green, "The essentials of instructional design: Connecting fundamental principles with process and practice," Routledge, London, (2016)
- [17] P. L. Smith and T. J. Ragan, "Instructional design," Macmillan New York (1993)
- [18] Domou, H. and Kameas, "A. Quality assurance model for digital adult education materials." *Quality Assurance in Education*, vol.24, no.4, pp. 562-585, (2016) DOI:10.1108/QAE-03-2015-0008
- [19] H. Ullah, A. Rehman, S. Bibi, "Gagne's 9 events of instruction-a time tested way to improve teaching," *Pakistan Armed Forces Medical Journal*, vol.65, no.4, pp.535-539 (2015)
- [20] R. Gagne, L. Briggs and W. Wager, "Principles of instructional design (4th Ed.)," HBJ College Publishers, Texas (1992)
- [21] D. F. Halpern and M. D. Hakel, "Applying the science of learning to the university and beyond: Teaching for long-term retention and transfer," *Change: The Magazine of Higher Learning*, vol.35, no.4, pp.36-41, (2003) DOI:10.1080/00091380309604109
- [22] Csun.edu. "The Madeline Hunter model of mastery learning," <https://www.csun.edu/sites/default/files/Holle-Lesson-Planning.pdf>, (2009)
- [23] M. Hunter, "Teaching is decision making," *Educational Leadership*, vol.37 no.1, pp.62-64, (1979)
- [24] L. O. Wilson, "Madeline Hunter lesson plan model or drill that skill - A model of repetition and direct instruction," <https://thesecondprinciple.com/essential-teaching-skills/models-of-teaching/madeline-hunter-lesson-plan-model/> (2022)
- [25] R. A. Gibboney, "Madeline Hunter's teaching machine." <https://rethinkingschools.org/articles/madeline-hunters-teaching-machine/> (2022)
- [26] Lesly University, "Empowering students: The 5E Model explained" <https://lesley.edu/article/empowering-students-the-5e-model-explained>, (2022)
- [27] S. Açışlı, S. Y. Altun, and Ü. Turgut, "Effects of the 5E learning model on students' academic achievements in movement and force issues." *Procedia Social and Behavioral Sciences*, vol.15, pp.2459-2462, (2011) DOI: 10.1016/j.sbspro.2011.04.128
- [28] Department of Education, "Senior high: An introductory guide to senior high school," <http://www.deped.gov.ph/k-to-12>, (2015)
- [29] Commission on Higher Education, "General education curriculum: Holistic understandings, intellectual and civic competencies," <http://www.ched.gov.ph/wp-content/uploads/2013/07/CMO-No.20-s2013.pdf>, (2013)
- [30] I. D. Jacobsen, "Vad, hur och varför?metodval i företagsekonomi och andra samhällsvetenskapliga ämne," *Studentli tteratur*, Lund (2002)
- [31] G. Cousin, "Case study research, " *Journal of Geography in Higher Education*, vol.29, no.3, pp.421-427, (2005) DOI: 10.1080/03098260500290967
- [32] R. Yin, "Case study: Design and methods (5th ed.)," Sage, Thousand Oaks, CA, (2014)
- [33] K. Ndiokubwayo, "Lesson plan analysis protocol (LPAP): A useful tool for researchers and educational evaluators," *Heliyon*, vol.8, no.1, pp.1-7, (2022) DOI:10.1016/j.heliyon.2022.e08730
- [34] S. Sesorina, "The analysis of teachers' lesson plan in implementing theme-based instruction for teaching English to young learners" *E-Journal on English Education*, vol.2, no.1, pp. 84-95. (2014)
- [35] A. Lou, "Content analysis: Guide, methods & example," Scribbr, <https://www.scribbr.com/methodology/content-analysis/> (2022)

- [36] H. Aacharya, "Content analysis," *EPRA International Journal of Research and Development*, vol.7, no.4, pp.177-180, (2022) DOI: 10.36713/epra2016
- [37] L. Ho, and A. Limpaecher, "How to do thematic analysis. essential guide to coding qualitative data," *Delve*, <https://delvetool.com/blog/thematicanalysis> (2022)
- [38] J. Caulfield, "How to do thematic analysis: step-by-step guide & examples," *Scribbr*, <https://www.scribbr.com/methodology/thematic-analysis/> (2019)
- [39] J. W. Creswell and C. N. Poth, "Qualitative inquiry and research design choosing among five approaches," Sage, London, (2007)
- [40] M. B. Cahapay, "How to plan lessons in the new normal education: A reintroduction to selected instructional design processes," *Aquademia*, vol,5, no.1, pp.ep21006 (2021) DOI: 10.21601/aquademia/10807