
The Synergy of ADDIE Model and ABCD Principles: A Systematic Framework for Effective Instructional Design

Amelia Mona Sari Nst¹, Sri Murhayati²

¹²Postgraduate of Sultan Syarif Kasim State Islamic University of Riau
12130322463@students.uin-suska.ac.id¹, sri.murhayati@students.uin-suska.ac.id²

*Author Corresponding

ABSTRACT

This study examines in depth the essential relationship between instructional design analysis and the formulation of learning objectives as two key components of effective learning program design. Instructional design analysis, which includes the Analyze, Design, Develop, Implement, and Evaluate phases, positions the ADDIE model as a systematic framework for designing, developing, and evaluating effective learning programs. From the results of this analysis, measurable and relevant learning objectives can be formulated. This article describes the stages of analysis in detail and relates them to the principles of learning objective formulation, namely ABCD (Audience, Behavior, Condition, Degree). Using a qualitative-descriptive approach and a literature review, it can be concluded that a combination of careful analysis and the formulation of appropriate goals will yield a learning program that is not only relevant but also optimized to improve student learning outcomes.

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INTRODUCTION

In education and training, the success of a program is measured not only by the material presented but also by how much it changes students' knowledge, skills, and attitudes. The systematic process of achieving this is known as instructional design. Two key variables that are interrelated and inseparable in this process are the analysis of instructional design and the formulation of learning objectives. Analysis serves as the designer's eyes and ears, gathering vital data, while the learning objectives serve as the compass guiding the entire design process. (Aida, 2023)

In the context of learning, instructional design plays a vital role in helping educators and designers design effective and efficient learning processes. The key is to systematically plan all components, including materials, activities, learning resources, and evaluations. With careful planning, learning can achieve its goals and encourage more active communication and interaction between teachers and students.

This article will thoroughly explore these two variables, explaining that in-depth analysis is an absolute prerequisite for formulating specific, measurable, and meaningful learning objectives. Without adequate analysis, learning objectives can become vague and unrealistic, ultimately resulting in ineffective learning programs. Instead, through careful analysis, designers can ensure that each learning element contributes directly to the desired outcome.

METHOD

The research method employed in this study is qualitative, using a literature review approach that draws on references from books, journal articles, and other scientific sources. The steps taken in this study are: first, seek references from various literature regarding "Instructional Design Analysis/Learning Objectives "; second, the stage of analysis; and third, the stage of concluding.

RESULTS AND DISCUSSION

A. Instructional Design Concepts

1. Definition of Instructional Design

Design is the initial stage in the Development of a product or system, serving as a framework for its realization. Design involves applying various techniques and principles to define a device or process in sufficient detail for physical realization. Meanwhile, the term "instructional", which is often equated with "teaching" and "learning", actually has different meanings. Learning is the process by which a person becomes a learner, while teaching is the act of teaching carried out by the teacher. In simple terms, learning design is a planning process that ensures students can learn the material effectively. This stage begins with setting goals, followed by designing a learning strategy that includes selecting appropriate methods, techniques, and media. It concludes with an evaluation of the extent to which the set goals have been achieved. (Puwarno & Naibaho, 2023)

Based on the definitions of instructional design from several experts, it is obtained as follows:

- a. According to Dick, Carey, and Carey, instructional design is a systematic process of designing a consistent and reliable learning program. They view instruction as a system of interacting elements, including instructors, learners, materials, media, and learning activities. (Chamisijatin et al., n.d.)

- b. M. Atwi Suparman explained that instructional design must depart from a careful needs analysis to ensure its effectiveness. He emphasized that instructional design is a systematic process of designing, developing, and evaluating learning materials and experiences to achieve predetermined goals. (Hamalik, 2005)
- c. Syaiful Sagala also defined a local point of view, where he sees instructional design as the systematic Development of teaching. According to him, this design is a series of organized, sequential procedures for developing a teaching curriculum using consistent, reliable methods. (Sanjaya, 2020)

Based on these definitions, instructional design is a systematic, structured process for designing, developing, and evaluating learning materials that are effective, efficient, and engaging for students. This process considers specific learning objectives, the strategies to use (including methods, techniques, and media), and evaluations to measure success. In short, instructional design is a framework that guides the creation of learning experiences.

2. Definition of Instructional Strategies

According to Dick, Carey, and Carey, instructional strategies encompass various aspects of lesson design. This includes choosing a delivery system, arranging and grouping materials, determining which learning components to include, deciding how to group students, structuring lessons, and selecting appropriate media.

They divide the components of instructional strategies into five main stages:

- a. Preinstructional activities: Includes attracting attention, explaining goals, and reminding and promoting prerequisite skills.
- b. Content presentation: Conveys the content of the material and provides learning guidance.
- c. Learner participation: Involves practice and giving feedback.
- d. Assessment: Uses initial, pretest, and posttest skills tests.
- e. Follow-through activities: Provide memory assistance for retention and consider the transfer of learning to real-life situations.

Gagne, Wager, Colas, and Keller examine instructional strategies in terms of their function, i.e., as tools or techniques used by educators and learning designers to design and facilitate the learning process.

Meanwhile, Rothwell and Kazanas define instructional strategy as a comprehensive plan that governs both what will be taught (content) and how it will be taught (process). This plan includes the sequence of activities, Table of contents, methods, media, tools, and time allocation during the learning process. (Safitri & Aziz, 2022)

M. Atwi Suparman defines instructional strategy as a comprehensive approach in managing the content and learning process to achieve specific goals. It is important to note that he distinguishes instructional strategy from instructional design. Instructional design is likened to a "blueprint" that is compiled after a learning strategy has been decided. In other words, instructional strategies form the foundation on which designers and educators craft instructional designs. (Ministry of Education and Culture, 2019)

From the various opinions above, it can be concluded that instructional strategies are tools or approaches that educators and learning designers use to create compelling and engaging learning experiences. This includes the selection of methods, learning steps, and the tools or media to be used.

3. Key Components of Instructional Strategy

The preparation of components in instructional strategies must be grounded in psychological theories, including humanism, behaviorism, cognitivism, constructivism, and cybernetics, as well as in established instructional principles. This strategy comprises three main components: the sequence of activities, the content outline, and the delivery system, which includes methods, media, tools, and time allocation. All of these components work together to achieve learning objectives.

According to Joyce and Weil, instructional strategies are synonymous with learning models. Learning is the process by which students acquire information, skills, values, and ways of thinking, enabling them to explore themselves and enhance their learning abilities. Thus, an integrated learning strategy is not merely about translating the curriculum into an activity plan or organizing materials; it aims to develop students' capacity to continue learning. (Hamalik, 2005; Sanjaya, 2020; Sugiyono, 2015)

a. Instructional Activity Sequence

This sequence of activities consists of three stages that are continuous and cannot be reversed:

- 1) Introduction: This initial stage, also called *preinstructional activities* by Dick, Carey, and Carey, aims to prepare students mentally. Its function includes a brief explanation of the lesson content, its relevance, and the learning objectives.

- 2) **Presentation:** This is the core of learning that contains material descriptions, examples, and non-examples, exercises, formative tests, summaries, and glossaries. You can repeat these subcomponents as needed to present different material while maintaining a single instructional strategy.
- 3) **Conclusion:** This last stage has two steps: feedback, which is informing students of the results of the formative test, and follow-up, which is the activity that students do after receiving the feedback.

b. Outline of Contents

The content outline presents the subject matter and sub-subjects that define the scope of the learning material in relation to the instructional objectives.

c. Instructional Methods

This method is a way of delivering material to students to achieve a specific goal. Examples include lectures, demonstrations, discussions, independent studies, and case studies.

d. Instructional Media and Tools

Learning media are used because they can visualize small objects, represent distant objects, and simplify complex events. Today, digital multimedia, such as USB drives, laptops, and open educational resources (OER), are increasingly used.

e. Time

Time allocation refers to the time teachers and students need to complete each step of learning. Time calculated includes classroom meetings, self-study, and off-hours assignments. The total number of hours is also a determinant of the weight of the semester credit unit (SKS) of a subject.

4. Instructional Design Models

According to Sugiyono, the ADDIE model comprises five stages: Analysis, Design, Development, Implementation, and Evaluation. In accordance with the chosen model, (1) at the stage of analysis, what is done is to analyze needs and problems in the form of relevant materials, textbooks, and learning conditions; (2) at the design stage, several activities are carried out, including formulating learning objectives, determining the material or subject to be studied, then the preparation of teaching materials with a systematics that has been adjusted to the needs of students; (3) the Development,

preparation and writing of materials in the textbook that are adjusted to the needs of students in carrying out learning activities; (4) the implementation stage is the use of Development products in the form of teaching materials in learning activities; (5) and the evaluation stage, carried out formatively at the product Development stage in accordance with the model used. (Sugiyono, 2015, p. 38)

The ADDIE model serves as a systematic and structured framework for developing effective, efficient, and engaging learning programs. By dividing the instructional design process into five phases, the model guides designers, educators, and trainers in creating materials that are planned, executed, and refined to achieve maximum impact.

The Dick & Carey model has the following steps:

- a. Identifying Instructional Goals
- b. Conducting Instructional Analysis
- c. Identifying Entry Behaviors and Characteristics
- d. Formulating Performance Objectives, Developing Criteria, Referenced Test, Developing Instructional Strategy, and developing Selection Instruction.
- e. Designing and implementing formative evaluation
- f. Designing and Conducting Summative Evaluation: Revising Instruction

B. Concept of Learning Objectives

1. Definition of Learning Objectives

According to various views, learning objectives are defined as the learning outcomes expected of students after participating in the learning process. This achievement may take the form of specific behaviors or competencies that students demonstrate at a predetermined level. Learning objectives can also be understood as a clear statement of the performance or skills that students are expected to achieve as a result of learning. (Fajriyah, 2019)

In addition, learning objectives are statements of the knowledge and skills expected of learners upon completion of the learning process. From another perspective, learning objectives are descriptions of the behaviors students are expected to demonstrate after learning. (Ministry of Education and Culture, 2021)

In Indonesia, in line with the concept used in the Ministry of Education and Culture's educational curriculum, the learning objective is a description of the

achievement of three aspects of competence (knowledge, skills, attitudes) attained by students in one or more learning activities. (Puwarno & Naibaho, 2023)

2. Formulating Learning Objectives

The formulation of learning objectives is an essential component of teaching and learning activities. This purpose guides students in mastering specific knowledge, skills, or behaviors by the end of the learning process. The behaviors of these learning outcomes must be measurable so teachers can assess students' mastery of the material. (Suparman, 2012) Learning objectives also direct the entire series of learning activities and must be included in the lesson plan, in accordance with the Ministry of Education and Culture Circular Letter No. 14 of 2019, which requires three components: learning objectives, activities, and assessment. (Sumar & Razak, n.d.)

The preparation of accurate, well-structured, and complete learning objectives is essential for guiding teachers in selecting materials, strategies, models, methods, and learning media. In formulating learning objectives, there are four main elements, abbreviated as ABCD: Audience, Behavior, Condition, and Degree. (Amaliyah, 2018; Hamalik, 2005; Sanjaya, 2020)

- 1) Audience: Refers to the subject as well as the main object in learning, namely, students. Students are central to the formulation of learning objectives because they are the ones who will achieve those goals.
- 2) Behavior: Refers to the behavior or activity expected of students. Behavior is written using operational verbs (KKO), such as "understand," "write," or "apply." Each goal should use one KKO to keep students focused and learning optimally.
- 3) Condition: Means conditions or requirements that must be met during learning, both before, during, and after the activity. This condition must be considered to ensure that the learning goals are achieved.
- 4) Degree: Indicates the minimum level of comparison or standard that the student must achieve. This level varies with the material being taught and may take the form of understanding, mastery, insight, or changes in student behavior.

CONCLUSION

Based on the above explanation, it can be concluded that the analysis of instructional design and the formulation of learning objectives are two core elements closely related to one another in creating a successful learning program. Instructional

design analysis functions as the "eyes and ears" for designers, gathering essential data. This process is crucial because without proper analysis, learning objectives can become unclear or unrealistic. Learning objectives act as a "compass" that guides the entire program design process.

In short, a blend of careful analysis and the formulation of the right goals is key. The combination of the two will result in a learning program that is not only relevant but also optimized to improve student learning outcomes.

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