



## IMPLEMENTATION OF FRONT END ANALYSIS IN DEVELOPING MEANINGFUL INSTRUCTIONAL OBJECTIVES IN COASTAL SCHOOLS: A CASE STUDY

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### ABSTRACT

One of the main drivers of human resource development is education. Particularly in coastal regions like Mantigola village, which is home to the Bajo tribe, Indonesia struggles to provide fair and high-quality education. One of the factors contributing to unequal access to education, according to the National Development Planning Agency (2014), is remote rural geographic settings. Aside from topographical issues, the primary concerns at Mantigola State Satap Middle School are inadequate infrastructure, low reading and writing literacy, and the pupils' fishing culture. The Merdeka Curriculum places a strong emphasis on creating learning experiences that are student-centered. Before establishing learning objectives, the Dick and Carey methodology provides a way to assess instructional needs using Front End Analysis (FEA). This study investigates how FEA is used at Satap Negeri Mantigola Middle School to create learning goals that are pertinent to the Merdeka Curriculum and appropriate for the students' setting. The implementation of FEA in this situation was examined using a qualitative descriptive case study methodology. The findings demonstrate how FEA aids in determining the needs, performance, and learning environments of students as well as in creating more purposeful and flexible learning objectives.

*Keywords: front end analysis, instructional objectives, coastal schools*

### 1. INTRODUCTION

An important step in a country's human resource development is education. Given its geographic and sociocultural variety, Indonesia continues to struggle to provide high-quality, equitable education. One of the factors contributing to unequal access to education, according to the National Development Planning Agency (2014), is remote rural geographic settings. This problem is made worse by a lack of resources and infrastructure in coastal places like Mantigola village, which is home to the Bajo tribe. SMP Satap Negeri Mantigola is one such location. Aside from that, other issues that must be addressed in appropriate learning include the diversity of student features, low literacy levels in reading and writing, and the seafaring culture, which

frequently results in student absences from class.

The current Merdeka Curriculum places a strong emphasis on a student-centered approach, allowing educators and schools to freely construct learning based on the traits and requirements of the pupils (Kemendikbud, 2021). This motivates teachers to create learning that is both meaningful and relevant for students, including the key element of learning design—instructional objectives. But given the particular circumstances and setting, applying these ideas to coastal regions calls for particular modifications. Thus, while creating educational objectives that take into account local needs and student characteristics, educators in coastal areas

**Vol 8, No 1 (2025): ESTEEM**

should employ a methodical approach. (Parker and Anderson, 2019)

A methodical approach to instructional design is provided by the Dick and Carey methodology. Before establishing instructional objectives, the Front End Analysis (FEA) of this methodology offers a framework for examining the learning environment, learner characteristics, and instructional needs. It is intended that the use of FEA will assist teachers in coastal regions, like SMP Satap Negeri Mantigola, in creating learning goals that are not only pertinent to the Independent Curriculum but also meaningful and contextual for the children. The purpose of this study is to investigate how SMP Satap Negeri Mantigola's instructional objectives can be developed using the Dick and Carey Model's Front End Analysis phase. It is also envisaged that this research would aid in the creation of more adaptable and successful learning methodologies for coastal regions.

**2. LITERATURE REVIEW****Education Problems in Coastal Areas**

There are many obstacles to schooling in coastal communities, particularly with regard to access and quality. Lack of public transit and inadequate infrastructure make it difficult to get to educational facilities. According to Indonesia Mengajar (2017), the primary barrier to education in coastal areas is difficult-to-reach geographic conditions, as many children must make hazardous and protracted travels to go to school. According to the 2015 UNESCO report, inadequate transportation and inadequate infrastructure frequently make it difficult for people to access education, which leads to high absenteeism and school dropout rates. The problem is made worse by a lack of educational resources, such books and educational technology, as well as educational infrastructure, including school buildings,

libraries, and labs (Kemendikbud, 2020; ADB, 2019).

In addition, local cultural and socioeconomic factors have an impact on education. According to Ali (2017) in Ikhsan et al. (2020), coastal populations have low levels of schooling, with since many kids must work to support their families, education is often ignored. According to the Central Statistics Agency (2021), children's school involvement is low in coastal areas due to a higher poverty rate than in other areas. Another major issue is local culture, which does not necessarily encourage education. Examples of this include early marriage and unfavorable views on women's education (Utami, 2017; UNICEF, 2018). These factors continue to be barriers to minority education in coastal communities today.

**Independent Curriculum and Meaningful Learning for Students**

The Republic of Indonesia's Ministry of Education, Culture, Research, and Technology states that the Independent Curriculum gives educational institutions the flexibility to create their own functional curricula based on the needs and characteristics of their students as well as their own unique circumstances. This promotes more autonomous and creative learning and makes learning more contextual and pertinent to the student's surroundings (Kemendikbudristek, 2021). The Merdeka Curriculum places a strong emphasis on a learner-centered approach, which permits flexibility in the creation of instructional materials so that students can study in accordance with their individual interests, skills, and capacities. It is anticipated that this method will boost students' motivation and engagement in the educational process.

One of the primary goals of the Merdeka Curriculum is to provide children with a relevant learning environment where they may be creative, think critically, and acquire 21st century skills. Merdeka Belajar

**Vol 8, No 1 (2025): ESTEEM**

seeks to give students the freedom to explore their interests and abilities in a flexible and adaptable learning environment, according to a news release from the Ministry of Education and Culture (2021). Giving educators more latitude in choosing the instructional strategies and learning designs that work best for their students helps achieve this.

**Dick and Carey Learning Design: Identifying Instructional Goals Using Front-End Analysis**

The act of organizing and creating methodical, structured learning experiences in order to accomplish specific educational objectives is known as learning design, according to Dick and Carey. A crucial phase in the learning design process is setting instructional objectives since doing so will guarantee that learning fulfills the actual needs of the students and the school (Reiser, R.A., & Dempsey, J.V., 2016).

Learning can be designed, developed, and revised using the Front End Analysis approach. In order to prepare instructional objectives utilizing Front End Analysis, a number of analyses were conducted based on the Dick and Carey (2015) approach.

First, the goal of performance analysis is to gather data to confirm the issue and pinpoint its primary cause. A performance analysis study's output includes a detailed explanation of the issue in terms of the inability to attain intended organizational results and actual performance, proof of the problem's root cause, and suggestions for potential fixes.

The second method is need analysis, also known as mismatch analysis, which compares the desired and current statuses. Setting desired criteria or goals, assessing the current state or degree of performance, and discovering discrepancies between the two to suggest a need make up this crucial performance analysis process.

Third, job analysis entails gathering, examining, and combining job task

descriptions to ascertain what employees perform in their positions. In the face of employment transformations and technology advancements, job analysis serves as a foundation for decision-making. A job task list is typically created, experts and current employees are surveyed to ensure task accuracy, important activities are summarized, and task analysis is carried out for high priority tasks. This thorough analysis aids in training development, work redesign, and raising job satisfaction and effectiveness. This analysis is highly pertinent to the context of vocational schools.

The fourth is the analysis and clarification of ambiguous objectives, or the analysis and elucidation of non-specific and ambiguous aims. Students' internal states are typically described by this type of objective, but it is unclear what has to be done to reach it. Writing goals, selecting success milestones, filtering to find the steps that best represent the goals, and then determining if the intended performance aligns with the goals are all processes in the analysis process. This is crucial since a lot of training and educational goals are first ambiguous but can have significant effects on instructive. Finding ideas and coming to an agreement on anticipated behavior can be facilitated by involving a range of individuals in this process.

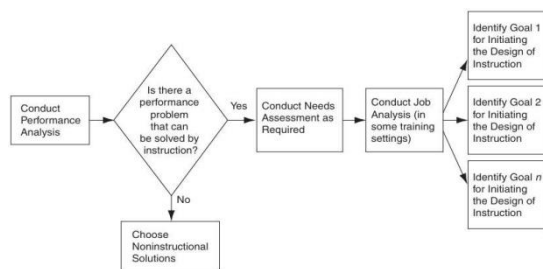
Fifth, learner, context, and tools: learning objectives must encompass not just what students will do but also their identities, the situation in which they will use their skills, and the tools at their disposal. In order for designers to be clear about the learner and the learning environment, this knowledge is crucial. A thorough statement of purpose should outline the learners' identities, their tasks, the performance setting, and the resources at their disposal.

Last but not least, when choosing instructional objectives, three factors need to be taken into account: whether the development will address the issue that led to its necessity, whether the objectives are

**Vol 8, No 1 (2025): ESTEEM**

acceptable to the people who need to approve it, and whether there are enough resources to finish the instructional development for these objectives. It is crucial to have the ability to justify and persuade instructional objectives to close documentation performance gaps inside an organization. Because it is hard to estimate how long it will take for students to master instructional objectives and how long it will take for instructional development, time and resource planning is also essential. In addition, the designer's comprehension of the material to be generated, the consistency of the content, and the availability of students to test the instructions must all be taken into account. Designers need to select learning goals that align with their skills and the resources at their disposal.

The following is the flow of the front-end analytic model used to create instructional objectives:



### 3. METHODS

Using Dick and Carey's framework for creating an efficient learning system based on student needs, this case study methodology was created to utilize Front-End Analysis (FEA) procedures in defining instructional objectives at SMP Satap Negeri Mantigola. This research's design is a qualitative descriptive case study with the goal of thoroughly understanding the use of FEA in a particular setting and the outcomes produced for Using Dick and Carey's framework for creating an efficient learning system based on student needs, this case study methodology was created to utilize Front-End Analysis (FEA) procedures in defining instructional objectives at SMP

Satap Negeri Mantigola. This study's design is a qualitative descriptive case study with the goal of thoroughly comprehending the use of FEA in a particular setting and the outcomes that arise from it. Case studies were chosen because they enable in-depth investigation of the procedures, situations, and results related to instructional design in particular educational environments (Yin, 2018).

According to qualitative research methodologies that place a premium on in-depth and precise understanding, the first stage in FEA is identifying instructional needs through the analysis of student grade data, learning observations, and interviews with pertinent stakeholders (Creswell, 2013). In order to determine the gaps between students' current skill set and the skills required by the curriculum, a performance analysis is then conducted to evaluate the fundamental and advanced abilities required of students in order to meet learning objectives (Dick, Carey, & Carey, 2015). Task analysis is done to find out what particular tasks pupils need to learn, how difficult the task is, and what skills they need to finish it (Jonassen, Tessmer, & Hannum, 1999). According to Tessmer and Richey (1997), context analysis include gathering information on the learning environment, available technology, student characteristics, and outside variables like school policies that may have an impact on learning design. In stakeholder analysis, different stakeholders are interviewed to learn about their expectations for planned learning. Interview data is then analyzed to determine the unique requirements and expectations of stakeholders (Bryson, 2018).

A fundamental tenet of creating successful instructional objectives is the formulation of explicit and quantifiable success criteria, which are based on the findings of the analysis of needs, performance, tasks, context, and stakeholder expectations (Mager, 1997). Qualitative techniques, such as observation, interviews, questionnaires, and the examination of learning materials like textbooks and Learning Outcomes documents, were used to

**Vol 8, No 1 (2025): ESTEEM**

gather data. In this application, triangulation is utilized to guarantee the data's quality and dependability. Case studies were chosen because they enable in-depth investigation of the procedures, situations, and results related to instructional design in particular educational environments (Yin, 2018).

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understand the specific tasks that students must master, identify the complexity of the task, and determine the abilities students need to complete the task (Jonassen, Tessmer, & Hannum, 1999). In stakeholder analysis, different stakeholders are interviewed to learn about their expectations for planned learning. Interview data is then analyzed to determine the unique requirements and expectations of stakeholders (Bryson, 2018).

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Table 1. Front End Analysis Observation Sheet

Langkah	Aspek yang diamati
Identifikasi Kebutuhan	Data Nilai Siswa Nilai Tinggi (80-100): _____ Nilai Sedang (60-79): _____ Nilai Rendah (0-59): _____
	Observasi Pembelajaran Keterampilan Menyimak: [ ] Baik [ ] Cukup [ ] Kurang Keterampilan Berbicara: [ ] Baik [ ] Cukup [ ] Kurang Keterampilan Membaca: [ ] Baik [ ] Cukup [ ] Kurang Keterampilan Menulis: [ ] Baik [ ] Cukup [ ] Kurang
Analisis Kinerja	Keterampilan yang diperlukan Keterampilan Menyimak: _____ Keterampilan Berbicara: _____ Keterampilan Membaca: _____ Keterampilan Menulis: _____
	Evaluasi Keterampilan Siswa Apakah siswa memiliki keterampilan dasar yang diperlukan? [ ] Ya [ ] Tidak

Table 2. Interview Front End Analysis English Instructional Objectives for grade 7

Aspect	Question
Identify Needs	<ul style="list-style-type: none"> <li>In your opinion, what are the main obstacles students face in learning English in grade 7?</li> <li>How do you assess students' initial skills in English before starting learning in grade 7?</li> </ul>

**IMPLEMENTATION OF FRONT END ANALYSIS IN DEVELOPING MEANINGFUL INSTRUCTIONAL OBJECTIVES IN COASTAL SCHOOLS: A CASE STUDY**

<p><b>Analisis Tugas</b></p>	<p>Tugas-tugas yang Harus Dijalankan                  Tugas Meminang: _____                  Tugas Berbicara: _____                  Tugas Membaca: _____                  Tugas Menulis: _____</p> <p>Kompleksitas Tugas                  Apakah tugas-tugas tersebut terlalu sulit? [ ] Ya [ ] Tidak                  Tugas-tugas dapat disederhanakan dengan...</p>
<p><b>Analisis Konteks</b></p>	<p>Karakteristik Peserta Didik                  Usia: _____                  Latar Belakang: _____                  Tingkat Literasi: _____</p> <p>Lingkungan Pembelajaran:                  Fasilitas Kelas: _____                  Teknologi yang Tersedia: _____</p> <p>Faktor-faktor Eksternal                  Kebijakan Sekolah: _____                  Sosial budaya: _____</p>
<p><b>Analisis Stakeholder</b></p>	<p>Harapan Stakeholder tercermin dalam tujuan instruksional:                  Guru: _____                  Kepala Sekolah: _____                  Orang Tua: _____                  Siswa: _____</p>
<p><b>Tujuan Instruksional</b></p>	<p>Spesifik : _____                  Dapat Diukur: _____                  Berfokus pada Kinerja Siswa: _____                  Kondisi yang Jelas: _____                  Standar atau Kriteria Kinerja: _____                  Relevan: _____                  Realistis dan Dapat Dicapai: _____</p>

**4. RESULT AND DISCUSSION**

**Application of Front-End Analysis in Developing Instructional Objectives at Satap N Mantigola Middle School**

The following is the process of implementing instructional objective design using the Front-End Analysis approach at Satap Negeri Mantigola Middle School, especially grade 7:

**1. Performance Analysis**

The results of performance analysis for grade 7 English subjects in the context of the Independent Curriculum can be seen from student grade records and the results of learning observations from English teachers which show several important findings including:

- Listening-Speaking Element: understanding and mastery of basic English vocabulary among students is still lacking; Students' ability to spell English words also needs to be a concern, especially students with

low reading and writing literacy problems.

- Elements of Reading- Viewing: many students have difficulty understanding the meaning of common words and simple phrases in English. Students' ability to read and understand English texts still needs to be improved. Lots students have difficulty identifying important information in the text and explaining the main idea and important details.
- Elements of Writing- Presenting: students still have difficulty constructing coherent sentences and defending their opinions clearly. Students still seem to need more guidance in using compound sentences to construct more complex sentences and express their thoughts in more detail and structure.

By involving discussions between the teacher and the deputy principal, the curriculum section designed an action plan as

**Vol 8, No 1 (2025): ESTEEM**

a solution to the performance problem, including:

- Integrating literacy content in English learning, for example providing time for students to read words or phrases, or providing learning media such as audio visuals which can help students who are not fluent in reading to follow the learning material easily.
- Integration of local wisdom content or things related to the real life of the Bajo people.
- Provides basic English vocabulary and effective spelling techniques. This can be done through interactive and practical learning activities, including the use of vocabulary and spelling games, for example using Quizizz.
- Learning strategies that focus on understanding the meaning of simple words and phrases in English, as well as effective reading techniques to identify important information and main ideas in texts.
- Special guidance in developing writing skills, by introducing students to the use of compound sentences and techniques for constructing coherent paragraphs.

## 2. Need Assessment

The results of the needs assessment for the 7th grade English subject of the Merdeka Curriculum show a gap between the skills expected in the learning achievement elements and those actually possessed by students. Ability to speak, read and write English still needs to be improved. The solutions needed include the use of interactive multimedia, development of interesting and relevant teaching materials for students, and intensive guidance.

## 3. Instructional Goals and Relationship to Needs

The teacher decides to design learning that focuses students on:

- Mention and/or spell English vocabulary.
- Identify the meanings of common words and simple phrases in English.
- Identify the meaning and purpose of the text
- Identify important information and main ideas in text
- Composing coherent sentences.
- Use compound sentences to be able to organize more complex ideas and express thoughts in a detailed and structured manner.

Through learning that is focused directly on the problems identified in the needs analysis, teachers hope to be able to overcome current problems.

## 4. Clarifying the Instructional Goal

To clarify the instructional objectives above, the teacher revised these objectives, namely:

- Students can name and/or spell familiar English vocabulary related to a topic.
- Students can identify the meaning of common words and simple phrases in English in spoken and written texts related to a topic.
- Students can identify the social function, structure of the text, and linguistic elements of the text
- Students can identify important information and main ideas in texts
- Students can use vocabulary to construct coherent sentences.
- Students can use simple compound sentences to organize ideas and express thoughts in a structured manner, both orally and in writing.

## 5. General Description of the Intended Learners

Learning with special emphasis on vocabulary and the construction and use of simple sentences is considered the most

**Vol 8, No 1 (2025): ESTEEM**

appropriate for grade 7 at SMP Satap N Mantigola with their knowledge of English being still basic and literacy skills still lacking.

#### 6. General Description of the Learning Context

The learning context includes classrooms at school and digital-based learning that can be accessed by students in the classroom or at home. Students can access learning materials and media anywhere. This shows that learning is not limited to classroom environment only, but also includes learning resources that can be accessed online outside of school hours.

#### 7. Description of Any Tools the Learner Will Need to Accomplish the Goals

At SMPN Satap N Mantigola, students will need several tools to achieve instructional goals, namely:

- Student textbook for the Independent Curriculum English subject.
- Notebooks and stationery for students to record important information, helping them remember and understand the concepts taught.
- Digital devices such as smart phones to access web-based learning materials and other digital resources.
- Stable internet connection to access online learning materials.

After going through the front end analysis process, five formulations of Instructional Objectives (TI) for Class 7 English Subjects based on the Merdeka Curriculum Learning Outcomes are as follows.

#### IT 1

Students can read and respond to texts that contain functions, structures and linguistic elements, especially familiar vocabulary related to a topic.

#### IT 2

Students can repeat and replace vocabulary to understand the meaning of common words and simple phrases on various topics in the context of life.

#### IT 3

Students can use vocabulary to construct coherent sentences in interacting with teachers, peers and other people politely in formal and informal situations.

#### IT 4

Learners can evaluate main ideas and specific information in various types of texts.

#### IT 5

Students can communicate ideas, arguments and experiences through simple and structured paragraphs using compound sentences.



**5. CONCLUSION**

Based on the application of Front-End Analysis (FEA) in preparing instructional objectives for grade 7 English subjects at SMP Satap Negeri Mantigola, it can be concluded that this approach has succeeded in identifying the main needs and challenges in students' abilities in listening-speaking, reading-viewing, and write-present in English. The proposed solutions, such as the integration of literacy content, the use of interactive multimedia, and special guidance in developing writing skills, are expected to significantly improve students' understanding and skills. Thus, it is recommended to continue to implement these strategies consistently and evaluatively in the learning process, as well as monitoring student progress to ensure instructional goals are achieved effectively.

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