

## CHAPTER II

### REVIEW OF RELATED LITERATURE

This chapter provides some basic studies of this study: Definition of *Duolingo*, Characteristics of *Duolingo* Application, Teaching English by Using *Duolingo* Application, and Purpose of Using *Duolingo*.

#### 2.1 Definition of Duolingo

*Duolingo* is a free, multilingual educational application created by an American educational technology company. The creators of this application were Luis Von Ahn and Severin Hacker in November 2012 (Jašková, 2014). The *Duolingo* application is designed to help users learn a new language interactively through various exercises, games, and quizzes (Fitriani et al., 2023). Freeman et al. (2023), explains that the free *Duolingo* program content is designed more like a game than a textbook because playing while learning makes learning easier. As a result, *Duolingo* has been recognized as an important tool for language learning, particularly in enhancing students' motivation and making the experience more enjoyable. A study conducted by Amin (2021), supports this, showing that gamification in *Duolingo* can increase student motivation in learning English. This application combines audio and visual elements, as well as questions related to the language's grammar, in a very fun way.

This application is available on iOS, Android, and Windows Phone, designed so that users can continue to improve their ability to communicate at any time and from any location (Azzahara et al., 2023). Moreover, the application offers a wide range of language courses, with over 100 total courses across more than 40 distinct

languages, from Spanish, French, German, and Japanese to Navajo and Yiddish (Freeman et al., 2023). This broad availability makes *Duolingo* a flexible and accessible resource for language learners worldwide.

## 2.2 Characteristics of the Duolingo Application

*Duolingo* has several key characteristics that contribute to its popularity among language learners. These characteristics include gamification, the practice of various language skills, and application flexibility.

### a. Gamification

One of *Duolingo's* most distinctive features is its gamification approach. The app incorporates game-like elements into language learning activities, offering exercises presented in an entertaining and interactive format. According to Munday (2016), gamification in language learning apps can increase user motivation and engagement; students enjoy the gamification aspect, so they feel like they are playing a game rather than doing academic work, which encourages them to continue using the app while learning.

### b. Practice of Various Language Skills

*Duolingo* enables users to practice multiple language skills. In reading, users engage with the sentences provided. In translation, they are tasked with converting sentences between their native language and the target language. Vocabulary skills are developed by matching words to their appropriate contexts. Writing skills users must accurately type responses to exercises. Listening skills are strengthened through audio clips featuring native speakers, as listening is crucial for improving pronunciation

(Bradley-Bennett, 2007). This comprehensive practice supports broad language development.

c. Application Flexibility

Another key characteristic of *Duolingo* is its flexibility in supporting independent learning. The application's design allows users to study at any time and place that suits their needs, making it highly adaptable to different learning styles and schedules. *Duolingo* is classified under the Mobile Assisted Language Learning (MALL) framework. Research by Nuraeni et al. (2020), found that mobile-assisted language learning (MALL), as implemented in *Duolingo*, offers new learning opportunities by enabling students to access materials wherever and whenever they choose, thus increasing learning flexibility beyond the traditional classroom setting.

This characteristic of *Duolingo* also aligns with the concept of self-regulated learning, as described by Zimmerman (2013), which refers to a process where students actively plan, monitor, and evaluate their learning behaviors. Additionally, Knowles (1975), introduced the concept of self-directed learning, where individuals take the initiative to identify learning needs, set goals, find resources, and assess learning outcomes. Together, these frameworks, MALL, self-regulated learning, and self-directed learning highlight how technology-based applications like *Duolingo* empower students to manage their learning autonomously, making language acquisition more accessible, flexible, and personalized.

### 2.3 Teaching English by Using the Duolingo Application

Using *Duolingo* to teach English to students can be a valuable addition to the learning curriculum to create effective teaching. Teachers can use “*Duolingo* for school” as a medium for creating assignments and monitoring students who work on the application. The major components of the *Duolingo* application are grammar and vocabulary, so it is recommended that this application be used to teach those subjects. According to Magnuson (2014), there are several ways to implement *Duolingo* in English instruction, including integration during class and assigning it as homework.

#### a. During Class

Teachers can allocate at least 50% of class time for students to work individually on *Duolingo* activities. The remaining time can be dedicated to collaborative language reviews or language awareness activities. At the same time, the teacher can also conduct the assessment and give some feedback, which is essential for effective learning. Feedback is a crucial aspect of the teaching-learning environment. It allows learners to reflect on their marks, understand their strengths, and identify areas for improvement (OBILOR & Isaac, 2019). Moreover, classroom language learning aligns with sociocultural theory, where interaction, negotiation, and collaboration are key processes (Scott & Palincsar, 2013).

#### b. As a Homework

Regardless of how effective time management is in the classroom, it is important to continue progress in *Duolingo* outside of the classroom. The

issue is that students would rather not use the application outside of class since they believe they have already used it in class, so they prefer not to use it outside of class. Teachers can motivate them by offering incentives, such as awarding extra points for English grades or extending assignment deadlines. Students will be more easily attracted to *Duolingo* than ever before, and because *Duolingo* is so accessible for quick learning, students will register at least a few points most days.

#### **2.4 Purpose of using Duolingo**

When learning a language for the first time, especially a foreign language, mastering vocabulary is crucial. Without a sufficient vocabulary base, it becomes difficult for learners to comprehend materials or understand spoken and written language. Therefore, one of *Duolingo's* main purposes is to assist users in expanding their vocabulary and overall language proficiency. Research by Apoko et al. (2023), showed that *Duolingo* helped beginners, especially in improving their vocabulary. The application's design focuses on providing input-rich activities that enhance vocabulary acquisition. This aligns with the Second Language Acquisition (SLA) theory proposed by Krashen (1981), which explains that comprehensible input is critical in the language learning process. Because language can be acquired only through comprehension, that is, by receiving “comprehensible input.”

In addition to vocabulary development, *Duolingo* also incorporates gamification elements that make the learning process enjoyable and help sustain

learner motivation. Many users are driven by instrumental motivation. If someone learns a language primarily for a purpose like getting a job or fulfilling an academic requirement, they are affected by instrumental motivation. Instrumental motivation refers to the motivation to acquire a language to achieve goals such as meeting academic requirements or improving career prospects (Susanto, 2018). Therefore, *Duolingo* supports both the linguistic and motivational needs of learners by offering an engaging and goal-oriented learning environment.

## **2.5 Definition of Perception**

Several experts provide different definitions of perception, even though in principle they have the same idea. According to Qiong (2017), perception is defined by the Longman Dictionary of Contemporary English as the way you think about something and your idea of what it is like; the way that you notice things with your senses of sight, hearing, etc; the natural ability to understand or notice things quickly. Perception is the result of evaluating information based on our environment through sight and hearing to determine whether something is positive or negative. Each person's perception of an object will undoubtedly be unique because knowledge, experience, and learning about an experienced object all influence a person's view.

## 2.6 Aspect of Perception

This study uses a three-component model of attitude in the formation of perceptions (cognitive, affective, conative, or behavioral) to analyze students' perceptions, as adapted from Haddock and Maio (2008), and supported by previous studies applying this model in perception research. Therefore, by using this model, this study aims to understand students' perceptions of *Duolingo* as an English learning application from multiple dimensions.

### a. Cognitive Aspect

The cognitive aspect is the part of a person's knowledge, understanding, information, and belief in an object or phenomenon.

### b. Affective Aspect

Affective aspects are aspects that are closely related to feelings of pleasure or displeasure or refer to a person's emotional reaction or feelings toward the object of perception.

### c. Conative Aspect

The conative aspect relates to the intention, motivation, or tendency to act towards the object of perception, or how a person's perception affects the actual response or behavior towards something.

Haddock and Maio (2008), explained that attitudes are summary evaluations of an object that consist of three main components above. Although originally used in attitude theory, these components are also relevant in understanding how perceptions are formed, especially in educational settings. When individuals form perceptions, they also engage in a process of evaluating an object through their

knowledge, emotions, and behavioral intentions. Many scholars in the field of psychology and education have also applied this framework to understand how individuals form perceptions.

For example, a thesis by SAPUTRA (2020), entitled “English Teachers’ Perceptions of Using Smartphones in Teaching and Learning at SMAN 1 Bangkinang Kota” also categorized perceptions into cognitive, affective, and conative aspects, showing that this framework is practical and applicable in understanding how individuals perceive educational technologies. His study demonstrated that teachers’ perceptions were shaped by their knowledge of smartphone use in education (cognitive), their feelings or attitudes toward its usage (affective), and their tendency to apply it in the classroom (conative). Also, another study supported by Pike and Ryan (2004), in their study “Destination Positioning Analysis through a Comparison of Cognitive, Affective, and Conative Perceptions”, this model has been effectively used to analyze perceptions in the context of tourism. Their research demonstrates that these three dimensions can reveal how individuals perceive and respond to a destination.

These examples strengthen the relevance of using this model in the present study. It confirms that the three-component framework is not limited to attitude analysis but can be effectively used to explore perceptions, especially in contexts where individuals' responses involve beliefs, emotions, and behavioral intentions as in the case of students' perceptions of *Duolingo*.

In this study, the three-aspect model was used as a basis for developing the interview questions and as a theoretical framework. The use of this theory in each

question allows for the exploration of students' perceptions from different perspectives. This theory is also employed by the researcher to link the research findings to these aspects in the discussion section or as an interpretive tool for understanding and explaining the findings academically.

## **2.7 Types of Perception**

Everyone certainly has different perceptions, which can be positive or negative. There are two types of perception namely negative and positive perceptions (Irwanto, 2002, as cited in Fitriani et al., 2023).

### **a. Positive Perception**

Positive perception is a perception that describes all information, and knowledge positively. In this case, if there is a positive perception, they will accept and support the object they perceive. This positive perspective has emerged because people are satisfied with their knowledge and experience.

### **b. Negative Perception**

Negative perception is a perception that describes information negatively, a person's negative judgment or interpretation of an object. The emergence of this negative interpretation is based on individual dissatisfaction, knowledge, and experience of observing the object. In this case, when an individual is faced with an object, they will reject or deny what they perceive.

## 2.8 Connection Between Duolingo and Perception

The relationship between *Duolingo* and user perception is shaped by various factors, including user experiences and interactions with the application. As users interact with *Duolingo*, they naturally form perceptions based on their insights, usage patterns, and satisfaction levels. The results of perception can be positive, negative, or both, depending on different aspects such as the app's features, ease of use, and learning outcomes.

Previous research supports this view. In a study on interactivity in language learning applications, Falk and Götz (2016), found that most participants who use the features on *Duolingo* felt that the automated feedback and interaction with the program itself were positive, helpful, and motivating. From here it is evident that users' perceptions of the quality of the app, including the user interface, learning content, and additional features, significantly influence users' overall perceptions of the application.