Semiotic Analysis of the Meaning of Social Support in the Lyrics of the Song Pelukku Untuk Pelikmu by Fiersa Besari

Rachmat Hidayat [1], Nurliah [2]
[1] *Universitas Mulawarman Samarinda, Indonesia*
[2] *Universitas Mulawarman Samarinda, Indonesia*

Corresponding Author: Rachmat Hidayat, E-mail; rachmathidayat@gmail.com

ABSTRACT

"Pelukku Untuk Pelikmu" is a musical work from a musician and book writer, Fiersa Besari. It was released as the soundtrack of the movie "Imperfect: Career, Love, & Scales" in 2019. Carrying the theme of self-confidence from one's insecure nature, this song is also intended for those who experience downturns and experience mental decline due to various problems in life so that they need positive encouragement to rise from these conditions. Therefore, indicators of social support are closely related and can be measured using sign analysis proposed by Ferdinand de Saussure. In his theory, Saussure describes five language concepts in the linguistic system that can be a knife to dissect the meaning of a text or sentence. Meanwhile, social support is divided into four types, namely emotional support, information support, instrumental/real support, and friendship support. The results of the meaning in the song lyrics will then classify each sentence in it into one of these types of support. The approach used in this research is descriptive qualitative by analyzing the relationship between Ferdinand de Saussure's semiotic theory and the concept of social support and then drawing conclusions based on the results of the analysis.

Keywords: *Analysis, Social Support, Song*

INTRODUCTION

Music is a combination of instruments, tempo, and rhythm into a harmony that is easily found in everyday life (Asman dkk., 2023). According to Jamalus, music is a work of art that is poured in the form of a song or composition as an expression of the feelings and thoughts of the author through musical elements such as melody, rhythm, harmony, and song form or structure and expression as a unit (1988: 1) (Yeltriana dkk.,

2023). One form of music is the combination of tones with lyrics that can be sung, so that in the instrument that is chanted there is a vocal sound that also accompanies it. This form of music is known as a "song". Based on its type, music belongs to mass communication. Pearce revealed that mass communication is a process that occurs between an individual, a group of people, or an organization that can create messages by transmitting through several types of media to a large audience that is heterogeneous and anonymous (Minarti dkk., 2023). Morissan (2008:21-22) also reveals that mass communication is carried out using technical media such as newspapers, radio, and television. In this concept, music is a mass communication medium composed by a musician to be received and listened to by the audience (Balaha dkk., 2021). Radio itself is a technical mass communication medium that can play songs from musicians to be listened to in a wide enough range.

Musicians themselves are social creatures who also have experiences and views according to their own thoughts. Therefore, musicians have the opportunity to pour their thoughts or experiences into music.

into musical works of art. Various themes have been raised in music, especially songs, along with the times (Kamorudeen, 2021). For example, in 1977, Ian Antono and Taufik Ismail wrote a song entitled "Panggung Sandiwara" which means that humans have different roles in living life (Holly dkk., 2023). This song was then performed by Ahmad Albar and became a song that is well known to the public to this day. Then there is the song with the title "Kita Selamanya" popularized by Bondan & Fade 2 Black which means that separation does not have to be accompanied by sadness, but optimism that the future will be more beautiful (Alsubaie, 2022). For listeners, music can have different meanings according to their thoughts. No different from the musicians who write a work, the factors of experience and outlook also become the reason how the listener of a work can interpret the work.

Song lyrics are a "weapon" for musicians because through words, they can convey messages or express themselves to others. Therefore, it can be said that the power of music lies in its lyrics (Almarzooq dkk., 2020). Through the lyrics, musicians can create various moods and allow listeners to imagine what is being described in the song (Xie dkk., 2019). Thus, listeners can interpret each song according to their own interpretation (Vicky dkk., 2023). Through the lyrics written by musicians, listeners can digest the content of the song by involving their interpretations as social beings like musicians as well as their daily experiences. With lyrics and combined with the right tone, a song can make listeners appreciate and absorb the meaning behind the message in the song.

In 2020, the Indonesian music industry is very rampant in carrying the theme of romance (Blanchete dkk., 2018). Some songs that were quite famous and caught the attention of the public in that year were dominated by songs about heartbreak and falling in love. However, there were only a few songs that inserted social messages in the lyrics. can grab the attention of the public (Sohn & Kwon, 2020). Indonesian music listeners are of course many of them teenagers who are experiencing periods of falling in love with the opposite sex. As a result, many romance-themed songs will be

increasingly in demand by those who also feel what the musicians want to express in their work.

The theme of romance has always been a theme that musicians always use in making song lyrics. Judging from the fact, songs with romance themes get a lot of attention from music listeners (Mustapa dkk., 2022). The frequency of viewing also reaches millions and continues to grow over time. So from that, many musicians release works with the theme of romance with the aim that the song can also be felt by listeners and of course become popular because of the frequent playing of the song.

In the midst of the many romance-themed songs that are popular in Indonesia, Fiersa Besari comes and slips in a social-themed song or not solely about romance (Wang dkk., 2020). It's different from most of the songs she has made popular, such as "April", "Celengan Rindu", and "Waktu yang Salah", which tell the story of a couple in terms of romance (Al-Ayyoub dkk., 2018). The song "Pelukku Untuk Pelikmu" tells the story of someone who encourages those around him to be more confident in living life with the shortcomings he has (Thaher dkk., 2021). The message of this song seems to speak that he does not have to be someone else to get what he wants.

The song "Pelukku Untuk Pelikmu" is one of the many songs that motivate listeners through its lyrics. In the lyrics, Fiersa describes that she has a friend or someone who is closely related to her and wants to convince her that she should be herself and not care about her shortcomings (Elnagar dkk., 2020). Fiersa illustrates that there is always someone who can be used as a shoulder to lean on to tell whatever complaints he is experiencing. Fiersa gives a positive message to those who have the same life story to always be confident and not give up easily.

This song is an interesting research object even though many other songs carry the theme of enthusiasm and motivation because the lyrics used provide a general description of how humans need other people to interact and share enthusiasm in facing obstacles in life as social beings (Boufenar dkk., 2018). In this song, the author does not necessarily write lyrics with common parables and use standard everyday language. One of the things that makes this song interesting is the delivery of the lyrics using words full of diction and not easy to digest the meaning of each sentence even though the big theme is known.

Fiersa Besari is the author of the song "Pelukku Untuk Pelikmu" as well as one of the most famous book authors in Indonesia. She wrote this song to be contributed to the soundtrack of the movie "Imperfect (Zhang dkk., 2021): Career, Love, & Scales" starring Jessica Mila and Reza Rahadian in 2019. He started his career in the music industry as a vocalist of an independent band in 2009 where he and some of his friends have recorded and saved many music works. Hellfairies and Eat Well Earl are bands that he has been in before finally making his own songs because of his heartbreak.

The reason the author wants to examine the lyrics of the song "Pelukku Untuk Pelikmu" is none other than because the song is a form of mass communication where the songwriter/singer as a communicator conveys the message in the song through lyrics to be received and listened to by the listener as a communicator (Huang dkk., 2021).

The media used by songwriters/singers in conveying messages in this song can use radio, television, or social media (Osamy dkk., 2021). That is as a support for how music and songs become part of mass communication. The message itself can be received by many people who listen to the song.

This song was nominated as the best original soundtrack production work by Yayasan Anugerah Musik Indonesia in the AMI Awards in 2020. This song also nominated Fiersa Besari in the award as the best pop male solo artist. The AMI Awards itself is the highest award event in the Indonesian music industry given by the Anugerah Musik Indonesia Foundation as a form of appreciation for the achievements of Indonesian musicians. Starting with the name BASF Awards, this event was held for the first time in 1985 and has become an annual event to date (Tuttle dkk., 2021). In 2020, this song has the opportunity to be nominated to win the best original soundtrack production work award. This indicates that this song is one of the works taken into account by the institution and influences the Indonesian music industry with the number of listeners or the quality of the song itself.

In addition to the award, this song became the original soundtrack of one of the 2019 films with an audience above 2 million and managed to occupy the list of the 50 highest grossing films in Indonesia (Jung, 2019). The movie is Imperfect: Career, Love, & Scales starring Jessica Mila and Reza Rahadian. This song also illustrates how the storyline in the movie is about someone who feels insecure about the treatment of his environment and tries to be imperfect.

for the better. Because this movie is widely watched and in demand by the public, the author is interested in lifting the original soundtrack that accompanies every part of the movie. In line with the movie, "Pelukku Untuk Pelikmu" gained success as a song that made listeners realize the importance of accepting circumstances and still living life optimistically. Describing the big theme of the movie in a song is something that is not easy so that each lyric has a meaning that can represent the situation and conditions in the movie scene.

On social media itself, this song has been published on several platforms. On Starvision Plus' YouTube channel, the lyric video of "Pelukku Untuk Pelikmu" has been played more than 22 million times since it was first uploaded in 2019. In addition, the comment section continues to be filled with the latest comments from various users. Some of them are summarized in the table below.

No.	Comment	Uploader	Upload Year
1.	"Accept what is, be grateful for what you have, wishful thinking is fine, envy is not. We are created with our own specialty. Just accept and be grateful"	Deka Fikal	2020
2.	"This song is a place for me to go home	Itsmeresalestaa	2023
3.	sometimes when the day is hard, insecure, need a place to tell, but realize that not everyone can	Zalfa Naufali Nadita Salma	2020

	understand and give good feedback.		
4.	magically this song has it all	Ferosita Sefaca Octaviasty	2021
5.	feel valuable again and excited again	Nicholas Krisna	2020

Meanwhile, data from Spotify, a streaming-based music service provider shows that this song has been played more than 82 million times and continues to grow to date. From this data, it can be concluded that the song, which was released in 2019, continues to be listened to by every group, especially young people where comments on YouTube accounts continue to grow over time, to the frequency of playback on Spotify which continues to gain listeners' attention.

According to Spotify's Regional Vice President of Sales for Asia Ong Sea Yean, 84% of Spotify users in Indonesia come from the 15 to 34 age group. Quoted from kompas.id, he mentioned that for activities outside the home, Spotify is used when users access public transportation, driving, working, sports, traveling, and running. Meanwhile, when inside the house, the app is used at bedtime, reading books or studying, in between cleaning the room, and waking up in the morning. It can be concluded that teenagers to adults also use Spotify and listen to music streaming. Many of them listen to music in casual settings and even at work. At this age, a person is in the transition from adolescence to adulthood, experiencing a quarter-life crisis phase.

According to Fischer (2008), quarter-life crisis is a period of emotional crisis that occurs in the early 20s due to feelings of worry about the uncertainty of life in the future around relationships, careers and social life. The triggering factors are from various aspects, including family demands for a more established life, having a partner, or a house at a young age. Supporting this statement, Atwood and Scholtz (2008: 241) explain the emotional crisis that occurs in this phase includes a sense of helplessness, doubt about one's own abilities, a sense of isolation, and fear of failure. In line with this phenomenon, the Student Creativity Program for Social and Humanities Research (PKM-RSH) team at Universitas Gadjah Mada through their research concluded that the concerns experienced by students are in the form of concerns about career continuity, education, romance, and finance. The emergence of these concerns is due to the demands of the self and the environment. According to The Conversation, research conducted by a team from the Division of Child and Adolescent Psychiatry, Faculty of Health at the University of Indonesia tried to map the mental unrest of adolescents in the transition period of 16-24 years from all over Indonesia, especially first-year students through an online survey. As many as 95.4% stated that they had experienced symptoms of anxiety, and 88% had experienced symptoms of depression in dealing with problems during this age. Meanwhile, quoted from jawapos.com, The Guardian stated in its research that 86% of millennials experienced a quarter-life crisis. A survey was also conducted by a research agency from LinkedIn, where the results showed that the quarter life crisis that occurred in the millennial generation was experienced by 61% of women.

Someone who is experiencing a quarter-life crisis needs social support from their environment, be it family or friends. Smet (1994) says that social support is one of the functions of social ties, and these social ties describe the general quality level of interpersonal relationships. An interaction between someone and their closest friends or family is classified as a form of communication. Communication that contains an invitation to positive things or motivation to be better can be said to be social support. When a person is supported by their environment, the problems faced will feel easier to overcome. Social support can protect a person from possible stress or depression during a quarter-life crisis.

Social support is information and feedback from others that shows that a person is loved and cared for, valued, respected, and involved in a reciprocal network of communication and obligations (King, 2010: 226). Social support is very influential on how a person in his toughest times wants to still feel happy or have an optimistic attitude in himself. Social support can be obtained from the closest people such as family or friends. When in the quarter-life crisis phase, a person is likely to experience stress or depression due to several factors such as demands to have a partner, home, or a more established life. A friend who provides social support will help social support provides positive energy and an optimistic attitude for a person to live and continue their life. With social support, a person can avoid the worst possibilities such as being depressed, closed, or even suicide attempts.

The relationship between the importance of social support and the reason the author raised this song is because this song is a song with lyrics with the theme of motivation and optimism to live life. The lyrics tell the story of someone who invites and convinces those closest to him that he can conquer all obstacles and live life with an optimistic and confident attitude. Through the lyrics, the songwriter tries to convey a positive message to the listeners as communicators. So if it is associated with the phenomenon of quarter-life crisis experienced by most teenagers towards adulthood, it will be closely related. Moreover, most young people listen to music on music service provider applications such as Spotify, where this song can be listened to. This song describes how a person in the quarter-life crisis phase must face all his problems with the help of social support from friends so as not to fall into a state of stress and depression. Intense interaction from a friend will be important because friends are the closest people who have similar hobbies, interests, or other things that cause their relationship to be close to each other. Therefore, as a song that has a motivational message, this song can be classified as social support that encourages someone in the quarter-life crisis phase to be able to live their life well and never give up even though problems continue to exist.

Based on this, researchers want to analyze and uncover what messages Fiersa Besari wants to convey in the song "Pelukku Untuk Pelikmu" and how this becomes a song that has the meaning of social support in every lyric presented to listeners.

RESEARCH METHODOLOGY

In terms of data and analysis, this research is included in the type of descriptive qualitative research. Qualitative research is more descriptive. The data collected is in the form of words or pictures, so it does not emphasize numbers. The data collected after being analyzed is then described so that it is easily understood by others (Sugiyono: 2020). Qualitative research methods based on the philosophy of postpositivism or interpretive, are naturalistic qualitative research methods whose processes are inductive, the data obtained is qualitative data, which still needs to be interpreted so that its meaning can be understood (Sugiyono: 2020). This can be concluded because this research examines the meaning of social support in a song lyric with published data sources and theories that have been presented by many experts. Then, the data is then analyzed with a descriptive and analytical method of describing the meaning of lyrics about the meaning of social support associated with semiotic theory by Ferdinand de Saussure.

The focus of this research is how the lyrics of songs by famous singers in Indonesia are dissected using Ferdinand de Saussure's semiotic theory and the concept conveyed by Sarafino about the types of social support, namely emotional support, instrumental support, information support, and friendship support. Because of the type itself, the lyrics in this song are in the form of social support from someone for the closest person who is experiencing the lowest point in his life. Where emotional support is an encouragement in the form of appreciation, care, and affection so that the intended person gets a positive message and influences what he is experiencing. This meaning can be found in the lyrics of the song "Pelukku Untuk Pelikmu" which will also be analyzed using the semiotic concept of Ferdinand de Saussure.

The data sources used in this study consist of primary data and secondary data.

1. Primary data, is a data source that directly provides data to data collectors. The data is collected by the researcher directly from the first source or place where the research is conducted. (Sugiyono, 2018: 456) In this study, researchers took data directly from the song in question, namely "Pelukku Untuk Pelikmu" which is one of the songs by Fiersa Besari. The lyrics of this song as a whole have been published on the music service platform, Spotify. Through this application, researchers get primary data sources to explore chapter 4 later. This song is a pop genre with a beat and tempo that is not too fast or slow. The researcher will make meaning from the lyrics in the song "Pelukku Untuk Pelikmu" popularized by Fiersa Besari.

2. Secondary data, is a data source that does not directly provide data to data collectors, for example through other people or through documents. (Sugiyono 2018: 456) Journals, books, and theses are references for researchers in examining the object of research so that the data becomes accurate. In addition, literature or readings relevant to the research will be a reference for research for satisfactory results.

3. Secondary data, is a data source that does not directly provide data to data collectors, for example through other people or through documents. (Sugiyono

2018: 456) Journals, books, and theses are references for researchers in examining the object of research so that the data becomes accurate. In addition, literature or readings relevant to the research will be a reference for research for satisfactory results.

According to Lexy J. Moleong (2002) in his book, non-participant observation itself is an act of observation carried out by researchers by only performing one function, namely making observations. Meanwhile, according to Riyanto (2010), non-participant observation is research conducted when the observer does not take part in the observation. This type of observation is defined as an observation where the researcher observes the participant without interacting with him. In this study, song lyrics are positioned as "participants" where researchers see and analyze the lyrics that have been seen.

A document is something in the form of writing, pictures, or someone's work that has passed. The form of documents also varies. In this research, songs become documents that are classified into a person's work. The results of the document will be credible data that can be trusted especially supported by existing life history. The lyrics of "Pelukku Untuk Pelikmu" available on Spotify can be a secondary data source to support the discussion in chapter 4 because they are interconnected with the song so that it is expected to make it easier for researchers to describe the meaning contained in the lyrics.

RESULT AND DISCUSSION

In this chapter, researchers will describe and analyze how the meaning of social support contained in the lyrics of the song "Pelukku Untuk Pelikmu" by Fiersa Besari. After that, it will be discussed how the lyrics are included in the form of social support conveyed by the singer for the closest person.

The results of this research are obtained through an explanation of the concept of Ferdinand de Saussure's semiotic theory. Then, it will be analyzed what concepts can produce a meaning of social support for the lyrics.

This research is related to a song titled "Pelukku Untuk Pelikmu" written and sung by Fiersa Besari. This song is famous because it also became the soundtrack in the movie Imperfect: Career, Love, & Scales in 2019. Fiersa was trusted to write the song in accordance with the theme presented in the movie, which is how someone should not be discouraged by the problems that occur in his life.

Fiersa Besari is a songwriter and book writer who has been working in the music industry since her first album entitled "11:11" in 2012. The man born in Bandung, March 3, 1984, has been widely known since his song "Wrong Time" was widely listened to on social media in 2019. Since then, Fiersa Besari has become a musician whose works are taken into account. His songs "April", "Celengan rindu", and "Runtuh" in collaboration with young singer Feby Putri have captivated the hearts of Indonesian music listeners and have gained millions of views on social media. Apart from being a musician, Fiersa is also known as a writer who loves her music.

literature. He poured this into five books that have been written from 2016 to 2018. It is not uncommon for these books to become best sellers.

Since her first album in 2012, Fiersa Besari has released four music albums, some of which are related to the books she has written. Most of her writing style in the books is also reflected when she writes the works in her albums. Her choice of lyrics also uses diction that is very rare in Indonesian song lyrics. For example, in his first album he used the phrase "random patterns" as the lyrics in the song with the same title. Not only that, other words such as "temaram", "gamang", "reguk", and many more are found in her works. Fiersa also tried something different in her first album by using English lyrics. In the songs "Glimpse", "All I Need You", and "I Heart Thee" she uses English lyrics throughout the song. The themes raised in her works are diverse. Not only about romantic relationships, but also about relationships with parents, interest in mountain climbing, life motivation, and the environment. The song "Pelelukku Untuk Pelikmu" is one of several motivational songs written by him. This song tells the story of how someone encourages the closest person who is experiencing downturns due to problems in his life. These lyrics were made in 2019 and are not included in any of his four albums. This is because this song is specifically for the Imperfect movie soundtrack: Career, Love, & Scales in the same year. Here are the lyrics of the song "Pelukku Untuk Pelikmu".

Lay back your weariness and tell me
About anything I listen
Don't you ever feel alone
Look at me who never left

For me you are still the best
Whether your weight goes down or up

Sometimes it's okay
To not be okay
We are only human
It's natural to be imperfect

When you feel down
Look at your heart believe me
Everything that is complicated
Can be lightened with a hug

You say the world is not friendly
Well, that doesn't mean you have to change
Into someone you don't want to be
Who looks at you strangely from the mirror

> We need to be disappointed
> To know happiness
> Doesn't hurt make
> We strengthen each other?

This type of support includes several interactions such as empathy, caring, attention, and providing positive support to the closest person so that it can provide comfort and love to individuals so that they are able to undergo their living conditions when stressed because of the problems they face. This emotional support will make individuals who receive it feel more valued, given a sense of comfort, and loved. In the lyrics of the song "Pelukku Untuk Pelikmu", emotional support is depicted in several stanzas because the theme of this song itself is a song that motivates someone in their worst condition.

In the lyrics "don't ever feel alone" and "look at me who never left". These two sentences describe the songwriter's concern for those closest to him so that he sees around him that there are those who always accompany him even in the worst times. Likewise, the sentence "we are only human beings if we are not perfect" where the songwriter wants to convince those closest to him that he and everyone are only human beings who often make mistakes or are far from the word "perfect". Behind the sentence, the songwriter tries to revive the spirit of his closest person and bury his sadness by giving a small example of the concept of man and his life. Meanwhile, the last stanza also depicts emotional support in the sentence asking "don't wounds make us stronger?". The songwriter gives positive support to the person closest to him with a question sentence. The aim is to provide a view from the other side of the wound suffered by the person closest to them. The closest person can respond to the wound as a condition that makes him stronger than before in facing various problems.

From the lyrics mentioned above, it can be concluded that this motivational song has sentences that are full of social support, especially emotional support. Attention and care continue to be shown by the songwriter to convince the person closest to him so that the enthusiasm to face problems arises from within him and it means positive for his life. These lyrics can create a sense of confidence for those closest to them as well as a sense of being loved and valued as individuals. This is useful for lowering the level of stress suffered by those close to them in dealing with problems.

After finding some lyrics that are full of emotional support, the lyrics will then be described more deeply referring to the tools in Ferdinand de Saussure's semiotic theory such as signifier & signified, form & content, langue & parole, synchronic & diachronic, and syntagmatic & paradigmatic.

Signifier & Signified

Signifier is the signifier while signified is the sign. These two things are the concepts used by Saussure in analyzing the meaning of a text or sentence which will then produce a sign conclusion from the text or sentence. In the lyrics of this song, in the sentence "never feel alone", the analysis of the signifier can be described through

the fragment of the sentence "feel alone". While the signifier owned by the fragment of the sentence is the feeling of not having anyone around him. In this case, the signifier and the signified become the concept of the relationship between the lyrics and the meaning of the lyrics. As for the sentence "look at me who never leaves" which plays a role in the meaning of the lyrics.

as a signifier. The word "look" which has a signifier is to see or realize and "never leave" means that there is someone who survives and does not leave him. Furthermore, the sentence "we are only human beings if we are not perfect" as a signifier. The signifier of the word "human" is a social being who is always bound to one another and the word "perfect" is interpreted as a state where everything has almost no flaws. Meanwhile, in the fourth sentence "Doesn't the wound make us stronger?". The markers are the words "wound" and "strengthen". The meaning of the two words "wound" is the suffering that arises from something painful, and "strengthen" means the action to provide strength and resilience from the burden that is being befallen. This meaning is referred to as the signifier of the sentence.

Form & Content

Meanwhile, form, which means form and content, which means material, is the second device conceptualized by Saussure. In the lyrics "don't you ever feel alone" has a form that consists of 1 sentence, 5 words, and 28 letters. But if you replace it with the sentence "feeling alone is pointless", this sentence consists of 1 sentence, 6 words, and 34 letters. These two sentences are said to be different forms. The material or content contained in it is not much different from the meaning of the signifier and signifier, which is the songwriter convincing his closest people that they should never feel alone and have no one. The sentence "look at me who never leaves" has a form that consists of 1 sentence, 6 words, and 30 letters which, when connected to the previous sentence, has a rhyme ending in the letter i. If you replace it with the sentence "look at me who is always here," the sentence It consists of 1 sentence, 5 words, and 24 letters. The material or content in the sentence is about a songwriter who ensures his presence when the person closest to him is in his worst time. The writer does not leave and chooses to stay with those closest to him. Furthermore, the sentence "we are only human beings if we are not perfect" which has a form of 1 sentence, 7 words, and 39 letters has material or content where the writer emphasizes about his status and those closest to him as humans who sometimes make mistakes while it is normal. In the sentence "does not the wound make us stronger?" has the form of 1 sentence, 6 words, 42 letters, and 1 question mark. The material or content contained in the sentence is how the writer asks while forming confidence in the person closest to him in order to respond to the wound as a condition that makes him stronger than before.

Langue & Parole

Langue and Parole is one of the concepts of Ferdinand de Saussure's semiotics. Langue means a language that belongs to a certain language group. Parole is the practical implementation of langue and its use depends entirely on the individual who uses it. The sentence "never feel alone" can be categorized as langue because it is

understood by almost everyone who understands Indonesian. However, the concept of parole depends on the understanding and implementation of the listener of the lyrics, for example, listener A can say "you are not alone" or "you are not alone".

Listener B can say "there are so many people here". Similarly, the sentence "look at me who never leaves" can be understood by everyone who understands Indonesian. This is what can be referred to as langue. But sometimes listeners can implement different language constructions such as "look at me who is always here" or "I will always be in this place". Meanwhile, the sentence "we are only human beings, it is only natural that we are not perfect" can also be understood and understood as a langue for Indonesians. On the other hand, sometimes the person listening re-implements it as they wish such as "we are fallible" or "no human being is perfect". For the sentence "doesn't the wound make us stronger?", this can be a langue because it can be understood by most people who understand Indonesian. Meanwhile, its implementation according to the language construction of the person listening to it can vary. For example, listener A says "wounds make us stronger" and listener B says "to be able to strengthen each other, we must feel wounds".

Synchronic & Diachronic

Synchronic and diachronic are concepts of studying language in relation to time. Synchronic is a concept that studies grammar without regard to time sequence, while diachronic can analyze language that has been obsolete and preserved until now. In the sentence "never feel alone", the word "alone" in the synchronic concept can be understood as a condition where there are no other people around or feeling lonely. From the diachronic concept, the word also does not have a broader meaning than what has been mentioned above in the synchronic sense.

historical. From time to time, the word has the same meaning, which is a state where someone has no one around them. "Look at me who never left" has a synchronic concept where the word "look" means to see or realize and the phrase "never left" means not to leave. The diachronic concept in the word "look" also does not have much change in meaning from time to time, as well as the phrase "never leave" which has the same meaning as the synchronic concept. Furthermore, the sentence "we are only human if we are not perfect" has the meaning of a social being from the word "human" and a state that has almost no mistakes or shortcomings from the word "perfect" as a synchronic concept. The diachronic concept of the word "human" also sometimes has different meanings. Among them are humans as social creatures, and can also be interpreted as God's creation that has the mind to think. However, the word "perfect" in the diachronic concept has almost no meaning other than what has been mentioned above in historical terms. The sentence "doesn't the wound make us stronger?" has a synchronic concept of the word "wound" which means suffering caused by something painful and "strengthen" which means giving strength or resilience in facing problems. The diachronic concept of the word "wound" does not only mean the suffering of hurt feelings, but on the other hand, "wound" can be interpreted as the result of something that hurts physically such as hands, feet, or limbs. This can be interpreted by a child

who is running or riding a bicycle and falls to the ground. When he becomes an adult, he can interpret the word "wound" to be broader than just pain to the limbs. Meanwhile, "strengthen" does not have a diachronic concept because it has no change in meaning from time to time.

Syntagmatic & Paradigmatic

Syntagmatic can be defined as language utterances that can be understood word by word so as to produce meaning. The signifiers and signs discussed earlier are part of the syntagmatic concept. While paradigmatic is a language utterance in which one element of the language can be associated with another element. In the sentence "never feel alone" is a sentence that has a syntagmatic concept because it has words that can be understood so as to produce meaning. The paradigmatic concept is that when the word "you" in the sentence is replaced with someone's name, for example "Edo", it does not produce a change in meaning in the sentence. Just like the sentence "look at me who never leaves" can be interpreted easily so that the syntagmatic concept can be found in the sentence. While in the paradigmatic concept, when the word "look" is replaced with the word "look", it is not a problem because it does not cause a change in meaning. Furthermore, the sentence "we are only natural human beings if we are not perfect" has meaning from the signs contained in it so that it has a syntagmatic concept. While in the paradigmatic concept, when the word "we" is replaced by the sentence "you and me" or "Amin and Surya" does not change the meaning of the sentence. As for the sentence "doesn't the wound make us stronger?" which is also a syntagmatic concept. If the word "we" is replaced with the sentence "Aldi and Farhan" then it is okay because there is no change in meaning in the existing sentence.

The four semiotic concepts of Ferdinand de Saussure will be analyzed whether all of these concepts are related and able to provide meaning to emotional support or not. Seen from its use, the concept of signifier & signified is the concept of a sign in a text or sentence and how the concept or definition of meaning is. Saussure provides an understanding that a text certainly has a sign, namely the text itself, and also the meaning of the sign that can provide an overview of what the sign actually is. This relationship is referred to as sign and meaning which can make it easier for listeners to understand a sentence through its sign and meaning. Included in the signified in the sentences "Don't ever feel alone" and "look at me who never leaves" are the words "alone", "look", and "leave". This word certainly has a concept of meaning that is understood and agreed upon by the listener. The word "alone" means a condition where there is no one around, the word "look" which means to see or realize, and the word "go" which means to move away. The concept of meaning of the sign is what is meant by signified. The sentence "we are only human beings if we are not perfect" has markers, namely the words "human" and "perfect". The concept of the meaning of the word "human" is a social being who lives together and the word "perfect" means the condition of something that has almost no flaws. Likewise, the words "wound" and "strengthen" in the sentence "doesn't the wound make us strengthen each other?" are markers. While the sign is the concept of the meaning of the word "wound" which is as

suffering and "strengthen" as a form of giving strength to each other. Signs and signifiers are interconnected and play an important role so that a text or sentence can be easily understood.

easy to understand. Listeners who have understood the concept of the meaning of the five words and listened to the sentence "Don't ever feel alone, look at me who never leaves" as a whole will certainly understand that the sentence means emotional support because it is a form of attention and care from someone to the closest person. ". The listener will connect all the words as signs in the sentence and understand that what the lyrics want to convey is how someone forbids the closest person to feel alone, because he will always be by his side. In the sentence, it can also be understood that the person closest to him feels alone where when it is experienced, then a problem is being experienced so that he feels lonely. The form of emotional support is illustrated through the meaning of the words "look" and "go" about how someone convinces the person closest to him that despite the problems that have befallen him, he will not leave him. When the lyrics are spoken, the person who is in trouble feels that he is being cared for and appreciated by fellow human beings. So, through the concept of signifier and signified, the meaning of the sentence as emotional support can be generated.

However, the concept of Form & Content, which is also the concept of structuralism by Ferdinand de Saussure, cannot make the sentence interpretable as emotional support. Saussure argued that a language has the same form but with different content. This explains the design and model of a language in a sentence that can be said to be different, but the meaning remains the same. The meaning of emotional support cannot be found in the sentence "Never feel alone, look at me who never leaves" using the concepts of form and content. This is because the concept of form and content described by Saussure only emphasizes the relationship between the different forms of a sentence with the same meaning, not about the study of what meaning is contained in the sentence itself. To find out the meaning of emotional support in the sentence, it is necessary to study the signs, not the relationship between signs and the concept of meaning which may be different. Therefore The sign at one time and its relationship with other signs that are also at the same time. Meanwhile, if analyzed using the diachronic concept, it will focus on a sign and its development over time. If the word "alone" has the same meaning over time, it only studies the relationship between the word in the present and the past, not explaining how the word is actually constructed. The interpretation of a sentence into emotional support cannot be done using the concept of language study based on time. The concept of language learning based on time cannot produce a meeting point to produce the meaning of the lyrics as a form of emotional support. To find out the meaning of emotional support in the sentence, it is necessary to study sign by sign and the concept of meaning, not its relationship with other signs at one time or compare its development historically.

Finally, the syntagmatic and paradigmatic concepts are learning concepts of a text that mutually compose several signs and replace text elements with other elements and can change the meaning. Emotional support can be illustrated in the sentence "Never

feel alone, look at me who never leaves" through syntagmatic and paradigmatic concepts. However, these concepts are closely related to the concepts of signifier and signified discussed earlier as they complement each other.

so that this concept can strengthen the meaning of the sentence. When the sentence "don't ever feel alone, look at me who never leaves" is sung in its entirety without replacing one of the word elements with another word, the meaning of emotional support can of course still be understood (syntagmatic). Likewise, if one of the words in the sentence is replaced with another word or spoken indirectly but does not change the meaning, then the sentence can still be interpreted as emotional support (paradigmatic). Furthermore, the sentence "we are only human, it is natural to be imperfect" if one of the words that is a sign in the sentence is sung in full and composed, then the meaning of the resulting emotional support will not change (syntagmatic). If the sentence is sung indirectly where a word is replaced with another similar word but does not change the meaning, then the sentence can still be interpreted as emotional support. The sentence "don't wounds make us stronger?" also has the same syntagmatic and paradigmatic concepts. If the sentence is sung in its entirety without replacing any of the elements in the sentence, the meaning of emotional support can still be understood. If one of the words in the sentence is replaced with another word or the pronunciation is indirect and does not change the meaning, then the sentence is still interpreted as emotional support.

Instrumental support where this type of support can be interpreted as real assistance provided directly, such as facilities or materials, providing facilities needed by individuals, lending money, providing food, and the like. For example, someone experiences a flood disaster and one of his friends provides instrumental support in the form of assistance such as medicines and food. This support can help directly whoever receives it and the impact is very visible. It can also be a solution to the problems that are afflicting someone who needs material assistance or so as a solution. In the lyrics of the song "Pelukku Untuk Pelikmu", instrumental support is not clearly depicted in the sentences. Instrumental support in this song is only found in the fourth stanza, namely in the sentence "everything that is complicated can be alleviated with a hug". The songwriter not only suggests to his closest person that hugs are the solution to all his complicated problems, but also offers hugs to his closest person as a real help to relieve the emotional burden or stress that is being experienced. From this sentence, it can be concluded that this song does not depict much social support in the form of real help from the songwriter. However, the one sentence that has been mentioned above also has a positive impact on the person closest to him to be able to reduce the level of stress experienced by the hug given by the songwriter.

After finding lyrics that are full of instrumental support, the lyrics will then be deciphered using tools in Ferdinand de Saussure's semiotic theory such as signifier & signified, form & content, langue & parole, synchronic & diachronic, and syntagmatic & paradigmatic.

Signifier & Signified

Signifier is the signifier while signified is the sign. Both of these are concepts used by Saussure in analyzing the meaning of a text or sentence which will then result in the conclusion of the sign of the text or sentence. In the lyrics "everything that is complicated can be alleviated with a hug", this sentence, especially the words "complicated" and "hug" are what is meant by the signifier. Meanwhile, the meaning of the two words is referred to as the signifier. The word "complicated" is defined as something that is not as it should be and is so complicated to deal with. While the word "hug" is defined as the act of embracing the body as a form of concern for others.

Form & Content

Meanwhile, form, which means form and content, which means material, is the second device conceptualized by Saussure. In the lyrics "everything that is complicated can be alleviated with a hug" has a form that consists of 1 sentence, 8 words, and 48 letters. If replaced with the sentence "all your problems can be solved with a hug", this sentence has 1 sentence, 6 words, and 43 letters. This is what is called the form of two different sentences. The material or content contained in it is not much different from the meaning of the signifier and signifier, which is the songwriter convincing his closest person that all his problems can be eased with a hug.

Langue & Parole

Langue & parole is one of the concepts of Ferdinand de Saussure's semiotics. Langue means a language that is the common property of a certain language group. Meanwhile, parole is the practical implementation of langue and its use depends entirely on the individual who uses it. The sentence "everything that is complicated can be alleviated with a hug" can be categorized as langue because it is understood by almost everyone who understands Indonesian. However, the concept of parole is dependent on the understanding and implementation of the listener of the lyrics, for example, listener A can say "a hug can ease the problems you are experiencing" or listener B can say "all heavy problems can be alleviated with a hug".

Synchronic & Diachronic

Synchronic and diachronic is the study of language in relation to time. Synchronic is a concept that studies grammar without regard to time sequence, while diachronic can analyze language that has been obsolete and preserved until now. In the sentence "everything that hugs can be alleviated with a hug", the word "hug" in the synchronic concept can be understood as a form of physical touch that brings one body to another. From a diachronic concept, the word also has a broader meaning than what has been mentioned above. From time to time, the word can have different meanings when the communicator is a child who understands a hug as a form of affection from his parents to him, but when he grows up, this can be interpreted as a form of separation from friends or with his lover.

Syntagmatic & Paradigmatic

Syntagmatic can be interpreted as language utterances that can be understood through word by word so as to produce a meaning. While paradigmatic is a language utterance in which one element of the language can be associated with another element. In the sentence "everything that is complicated can be alleviated with a hug" is a sentence that has a syntagmatic concept because it is composed of words that can be understood so as to produce meaning. The paradigmatic concept, when the word "complicated" in the sentence is replaced with another word such as "complicate", it does not result in a change in meaning in the sentence.

Through the concept of signifier & signified, the words "complicated" and "hug" are signifiers that have a concept of meaning. The word "complicated" has the concept of meaning of something that is so complicated to deal with, while the word "hug" is interpreted as a physical embrace from someone with the intention of calming. This concept of meaning is referred to as the signifier. As discussed earlier, the relationship between the sign and the concept of meaning can make it easier for the listener to understand the sentence through the sign and its meaning. Therefore, the form of instrumental/real support can be found through the concepts of signifier and signified. For listeners who have understood the two words and listened to the sentence "everything that is complicated can be alleviated with a hug" as a whole, they certainly understand that the sentence means instrumental/real support. This can be seen if someone understands the word "hug" as a physical embrace to calm, then the listener can understand from the sentence that someone wants to offer a hug to relieve the stressful conditions experienced by the closest person due to the problems being faced. A hug is a tangible favor that one person gives to another. In this sentence, it can also be understood that the person closest to him is experiencing problems based on the phrase "everything is complicated" which is the reason that he deserves real help in the form of a hug from the person closest to him. When the lyrics are spoken, the person who is in trouble feels that he is receiving help and attention as a fellow human being.

Unlike the signified & signifier which play an important role in interpreting sentences as a form of instrumental/real support, form & content cannot make the sentence be interpreted as instrumental/real support. This is because the concept only studies the relationship between form and content of a text or sentence. The meaning of instrumental/real support cannot be found in the sentence "everything that is complicated can be alleviated with a hug" using the concept of form and content. This is because the concept of form and content presented by Saussure only emphasizes the relationship between different forms of a sentence with the same meaning, not about the study of what meaning is contained in the sentence itself. To find out the meaning of instrumental/real support in the sentence, it is necessary to study sign by sign, not the relationship between the sign and the concept of meaning which may be different.

It is the same when talking about langue & parole. This concept also cannot interpret sentences as instrumental/real support. Langue & parole studies the language

that has been agreed upon and becomes an abstract system by a nation or group (langue), and how individuals construct the language as something of their thoughts and speaking style (parole). In the sentence "everything that is complicated can be alleviated with a hug" it can certainly be understood that the sentence has the correct Indonesian spelling without any word order errors. Likewise with society where each person has different thoughts to realize the sentence according to their will in concrete terms. However, unfortunately it does not explain how the sentence produces instrumental/real support meaning. Saussure also emphasized that langue & parole study the language used based on who uses it. This concept certainly cannot make a sentence find The meaning as instrumental/real support is based on the thought of who the user is and how they speak. The listener may change the sentence structure according to his/her wishes and according to what he/she understands from the original sentence and then rephrase it into a different sentence. This is what allows the meaning of the sentence to vary.

Not only the two concepts above, the synchronic & diachronic concepts also cannot interpret sentences into instrumental/real support. Synchronic and diachronic study language based on the time of each sign. Synchronic studies a sign in a text from a certain time, while diachronic is concerned with the history and flow of time that accompanies the language. In the sentence "everything that is complicated can be alleviated with a hug" using the synchronic concept, the sentence can be studied how the words "complicated" and "hug" are based on a certain time line and connected to other similar word signs at a certain time (for example in the present). Meanwhile, the diachronic concept studies the development of the two words from the past to the present. If the word "hug" has the same meaning over time, it only studies the relationship between the word in the present and the past, not explaining how the word is actually constructed. Therefore, if it is related to the meaning of instrumental/real support, it cannot be obtained through the concept of language learning from time to time because of course it is inversely proportional to the study of meaning to be studied. The meaning of a sentence to be instrumental/real support cannot be done using the concept of analyzing language, its function, and its use in the past to the present. To find out the meaning of instrumental/real support in the sentence, it is necessary to study sign by sign and the concept of meaning, not its relationship with other signs at one time or compare its development historically.

However, the syntagmatic and paradigmatic concepts speak differently. These concepts are related to the concepts of signifier and signified discussed earlier. This concept reinforces the results of meaning using signifiers and signs. Through the arrangement of existing signs, of course the sentence "everything that is complicated can be alleviated with a hug" can be interpreted as instrumental/real support. However, in the paradigmatic concept, if the sentence is sung indirectly or if one sign is replaced with another sign that does not change the meaning, the meaning as instrumental/real support will not change. Therefore, this concept can also interpret the sentence to remain a form of instrumental/real support supported by the concept of signifier and signified.

CONCLUSION

The relationship between the meaning of social support in the song "Pelukku Untuk Pelikmu" using Ferdinand de Saussure's semiotic theory can be produced through five devices that examine the grammar of a text or sentence which can be detailed as follows.

1. Emotional support which is a form of attention or care is found in the lyrics "don't you ever feel alone", "look at me who never leaves", "we are only human beings if we are not perfect", and "doesn't the wound make us stronger?". The signifier & signified relationship is found in each of these sentences and of course produces a concept of meaning which, according to the syntagmatic and pardigmatic concepts, makes the sentence interpreted as a form of care and attention. Meanwhile, form & content, langue & parole, and synchronic & diachronic cannot find the meaning of the sentence because all three are language learning concepts in terms of sentence models, their use, and from a historical perspective. From the discovery of the four sentences, it can be concluded that emotional support is clearly depicted and dominates in the lyrics of "My Hug For Yours".

2. Informational support which includes advice, criticism, or direction can be found in the lyrics "You say the world is unfriendly. Well, that doesn't mean you have to change". The relationship between signifier & signified (signifier and signified) is contained in the sentence and of course produces the concept of meaning of each sign in it which according to the syntagmatic and pardigmatic concepts makes the sentence interpreted as a form of input or advice from the songwriter to his closest person. Meanwhile, form & content, langue & parole, and synchronic & diachronic cannot produce the meaning of the sentence because all three are language learning concepts in terms of sentence models, their use, and from a historical perspective. From the findings of the four sentences, it can be concluded that information support is clearly illustrated and dominates in the lyrics of "Pelukku Untuk Pelikmu".

3. Instrumental/real support which is a form of real assistance including physical assistance is found in the lyrics "everything that is complicated can be alleviated with a hug". The signifier & signified relationship is deepest in each sentence and certainly produces a concept of meaning which, according to the syntagmatic and pardigmatic concepts, makes the sentence interpreted as a form of providing physical assistance in the form of a hug. Meanwhile, form & content, langue & parole, and synchronic & diachronic cannot find the meaning of the sentence because all three are language learning concepts in terms of sentence models, their use, and from a historical perspective. From the findings of the four sentences, it can be concluded that instrumental/real support is clearly depicted and dominates in the lyrics of "My Hug For Yours".

Meanwhile, friendship support is not depicted at all in the lyrics of "Pelukku Untuk Pelikmu" because the form of friendship between the songwriter and the person closest to him is not clearly explained. This makes the meaning of friendship support cannot be analyzed properly.

REFERENCES

Abdul Afwu Godly Prayitno, M. Z. M. (2020). PENGEMBANGAN KURIKULUM PEMBELAJARAN BAHASA ARAB PADA MASA PANDEMI COVID-19. *AL-AF'IDAH: Jurnal Pendidikan Bahasa Arab dan Pengajarannya*, *4*(2), 15–29. https://doi.org/10.52266/al-afidah.v4i2.591

Al-Ayyoub, M., Nuseir, A., Alsmearat, K., Jararweh, Y., & Gupta, B. (2018). Deep learning for Arabic NLP: A survey. *Journal of Computational Science*, *26*, 522–531. https://doi.org/10.1016/j.jocs.2017.11.011

Aljarah, I., Habib, M., Hijazi, N., Faris, H., Qaddoura, R., Hammo, B., Abushariah, M., & Alfawareh, M. (2021). Intelligent detection of hate speech in Arabic social network: A machine learning approach. *Journal of Information Science*, *47*(4), 483–501. https://doi.org/10.1177/0165551520917651

Almarzooq, Z. I., Lopes, M., & Kochar, A. (2020). Virtual Learning During the COVID-19 Pandemic. *Journal of the American College of Cardiology*, *75*(20), 2635–2638. https://doi.org/10.1016/j.jacc.2020.04.015

Alsubaie, M. A. (2022). Impacts of Technology in Learning: Mobile Typing Applications for Writing and Accomplishing Academic Tasks among Arabic-Speaking Undergraduate Students. *Education Sciences*, *12*(12), 891. https://doi.org/10.3390/educsci12120891

Avisyah, G. F., Putra, I. J., & Hidayat, S. S. (2023). Open Artificial Intelligence Analysis using ChatGPT Integrated with Telegram Bot. *Jurnal ELTIKOM*, *7*(1), 60–66. https://doi.org/10.31961/eltikom.v7i1.724

Balaha, H. M., Ali, H. A., Saraya, M., & Badawy, M. (2021). A new Arabic handwritten character recognition deep learning system (AHCR-DLS). *Neural Computing and Applications*, *33*(11), 6325–6367. https://doi.org/10.1007/s00521-020-05397-2

Blanchete, I., Mourchid, M., Mbarki, S., & Mouloudi, A. (2018). Formalizing Arabic Inflectional and Derivational Verbs Based on Root and Pattern Approach Using NooJ Platform. Dalam S. Mbarki, M. Mourchid, & M. Silberztein (Ed.), *Formalizing Natural Languages with NooJ and Its Natural Language Processing Applications* (Vol. 811, hlm. 52–65). Springer International Publishing. https://doi.org/10.1007/978-3-319-73420-0_5

Boufenar, C., Kerboua, A., & Batouche, M. (2018). Investigation on deep learning for off-line handwritten Arabic character recognition. *Cognitive Systems Research*, *50*, 180–195. https://doi.org/10.1016/j.cogsys.2017.11.002

Boukil, S., Biniz, M., Adnani, F. E., Cherrat, L., & Moutaouakkil, A. E. E. (2018). Arabic Text Classification Using Deep Learning Technics. *International Journal of Grid and Distributed Computing*, *11*(9), 103–114. https://doi.org/10.14257/ijgdc.2018.11.9.09

Elnagar, A., Al-Debsi, R., & Einea, O. (2020). Arabic text classification using deep learning models. *Information Processing & Management*, *57*(1), 102121. https://doi.org/10.1016/j.ipm.2019.102121

Ertefaie, A., Small, D. S., & Rosenbaum, P. R. (2018). Quantitative Evaluation of the Trade-Off of Strengthened Instruments and Sample Size in Observational Studies. *Journal of the American Statistical Association*, *113*(523), 1122–1134. https://doi.org/10.1080/01621459.2017.1305275

Guerrero-Ibáñez, J., Zeadally, S., & Contreras-Castillo, J. (2018). Sensor Technologies for Intelligent Transportation Systems. *Sensors*, *18*(4), 1212. https://doi.org/10.3390/s18041212

Guillén-Gámez, F. D., & Mayorga-Fernández, M. J. (2020). Quantitative-comparative research on digital competence in students, graduates and professors of faculty education: An analysis with ANOVA. *Education and Information Technologies*, *25*(5), 4157–4174. https://doi.org/10.1007/s10639-020-10160-0

Heikal, M., Torki, M., & El-Makky, N. (2018). Sentiment Analysis of Arabic Tweets using Deep Learning. *Procedia Computer Science*, *142*, 114–122. https://doi.org/10.1016/j.procs.2018.10.466

Holly, S., Maulik, B., & Samuel, I. (2023). Use of Whatsapp as A Learning Media to Increase Students' Learning Interest. *Scientechno: Journal of Science and Technology*, *2*(1), 35–48. https://doi.org/10.55849/scientechno.v2i1.57

Huang, P., Miao, Q., Sang, G., Zhou, Y., & Jia, M. (2021). Research on quantitative method of particle segregation based on axial center nearest neighbor index. *Minerals Engineering*, *161*, 106716. https://doi.org/10.1016/j.mineng.2020.106716

Jung, Y. M. (2019). Data Analysis in Quantitative Research. Dalam P. Liamputtong (Ed.), *Handbook of Research Methods in Health Social Sciences* (hlm. 955–969). Springer Singapore. https://doi.org/10.1007/978-981-10-5251-4_109

Kamorudeen, B. (2021). The Impact of Information and Communication Technology on the Teaching and Learning of Arabic in Nigeria. *Journal of Muslim Minority Affairs*, *41*(4), 608–614. https://doi.org/10.1080/13602004.2022.2029011

Kato, N., Mao, B., Tang, F., Kawamoto, Y., & Liu, J. (2020). Ten Challenges in Advancing Machine Learning Technologies toward 6G. *IEEE Wireless Communications*, *27*(3), 96–103. https://doi.org/10.1109/MWC.001.1900476

Larabi Marie-Sainte, S., Alalyani, N., Alotaibi, S., Ghouzali, S., & Abunadi, I. (2019). Arabic Natural Language Processing and Machine Learning-Based Systems. *IEEE Access*, *7*, 7011–7020. https://doi.org/10.1109/ACCESS.2018.2890076

Loderer, K., Pekrun, R., & Lester, J. C. (2020). Beyond cold technology: A systematic review and meta-analysis on emotions in technology-based learning environments. *Learning and Instruction*, *70*, 101162. https://doi.org/10.1016/j.learninstruc.2018.08.002

Lulu, L., & Elnagar, A. (2018). Automatic Arabic Dialect Classification Using Deep Learning Models. *Procedia Computer Science*, *142*, 262–269. https://doi.org/10.1016/j.procs.2018.10.489

Mensah, C. N., Long, X., Dauda, L., Boamah, K. B., Salman, M., Appiah-Twum, F., & Tachie, A. K. (2019). Technological innovation and green growth in the Organization for Economic Cooperation and Development economies. *Journal of Cleaner Production*, *240*, 118204. https://doi.org/10.1016/j.jclepro.2019.118204

Mohammed, A., & Kora, R. (2019). Deep learning approaches for Arabic sentiment analysis. *Social Network Analysis and Mining*, *9*(1), 52. https://doi.org/10.1007/s13278-019-0596-4

Mulyasari, D., Noer, R. M., Sari, N., Ermawaty, E., Triharyadi, F., Tampubolon, D., & Catherine, S. (2023). Improving Health Status in The Elderly Through Health Checks and Education at Nuriah Nursing Homes in Karimun. *Pengabdian: Jurnal Abdimas*, *1*(2), 75–81. https://doi.org/10.55849/abdimas.v1i2.183

Mustapa, A. M., Ghani, S. Ab., Rahman, M. A., Nawawi, Z., & Kamarudin, M. A. (2022). *Evaluation of the online arabic treasure hunt as learning games activities using the technology acceptance model (TAM).* 040017. https://doi.org/10.1063/5.0092716

Osamy, W., Salim, A., Khedr, A. M., & El-Sawy, A. A. (2021). IDCT: Intelligent Data Collection Technique for IoT-Enabled Heterogeneous Wireless Sensor Networks in Smart Environments. *IEEE Sensors Journal*, *21*(18), 21099–21112. https://doi.org/10.1109/JSEN.2021.3100339

Pamuji, S., & Limei, S. (2023). The Managerial Competence Of The Madrasa Head In Improving Teacher Professionalism And Performance At Mi Al-Maarif Bojongsari, Cilacap District. *Pengabdian: Jurnal Abdimas*, *1*(2), 66–74. https://doi.org/10.55849/abdimas.v1i2.158

Ramadhan, F. K., Faris, M. I., Wahyudi, I., & Sulaeman, M. K. (2023). PEMANFAATAN CHAT GPT DALAM DUNIA PENDIDIKAN. *Jurnal Ilmiah Flash*, *9*(1), 25. https://doi.org/10.32511/flash.v9i1.1069

Shorman, S., Jarrah, M., & Alsayed, A. R. (2022). The Websites Technology for Arabic Language Learning Through COVID-19 Pandemic. Dalam A. Hamdan, A. Harraf, P. Arora, B. Alareeni, & R. Khamis Hamdan (Ed.), *Future of Organizations and Work After the 4th Industrial Revolution* (Vol. 1037, hlm. 327–340). Springer International Publishing. https://doi.org/10.1007/978-3-030-99000-8_18

Sohn, K., & Kwon, O. (2020). Technology acceptance theories and factors influencing artificial Intelligence-based intelligent products. *Telematics and Informatics*, *47*, 101324. https://doi.org/10.1016/j.tele.2019.101324

Staszak, M., Staszak, K., Wieszczycka, K., Bajek, A., Roszkowski, K., & Tylkowski, B. (2022). Machine learning in drug design: Use of artificial intelligence to explore the chemical structure–biological activity relationship. *WIREs Computational Molecular Science*, *12*(2). https://doi.org/10.1002/wcms.1568

Tan, J., Liu, W., Xie, M., Song, H., Liu, A., Zhao, M., & Zhang, G. (2019). A low redundancy data collection scheme to maximize lifetime using matrix completion technique. *EURASIP Journal on Wireless Communications and Networking*, *2019*(1), 5. https://doi.org/10.1186/s13638-018-1313-0

Thaher, T., Saheb, M., Turabieh, H., & Chantar, H. (2021). Intelligent Detection of False Information in Arabic Tweets Utilizing Hybrid Harris Hawks Based Feature Selection and Machine Learning Models. *Symmetry*, *13*(4), 556. https://doi.org/10.3390/sym13040556

Theobald, E. J., Hill, M. J., Tran, E., Agrawal, S., Arroyo, E. N., Behling, S., Chambwe, N., Cintrón, D. L., Cooper, J. D., Dunster, G., Grummer, J. A., Hennessey, K., Hsiao, J., Iranon, N., Jones, L., Jordt, H., Keller, M., Lacey, M. E., Littlefield, C. E., … Freeman, S. (2020). Active learning narrows achievement gaps for underrepresented students in undergraduate science, technology, engineering, and math. *Proceedings of the National Academy of Sciences*, *117*(12), 6476–6483. https://doi.org/10.1073/pnas.1916903117

Tuttle, J. F., Blackburn, L. D., Andersson, K., & Powell, K. M. (2021). A systematic comparison of machine learning methods for modeling of dynamic processes

applied to combustion emission rate modeling. *Applied Energy*, *292*, 116886. https://doi.org/10.1016/j.apenergy.2021.116886

Vicky, D., Adrianna, H., & Phan, B. (2023). Use of Gadgets by Early Childhood in the Digital Age to Increase Learning Interest. *Scientechno: Journal of Science and Technology*, *2*(1), 17–34. https://doi.org/10.55849/scientechno.v2i1.58

Wang, B., Hu, S. J., Sun, L., & Freiheit, T. (2020). Intelligent welding system technologies: State-of-the-art review and perspectives. *Journal of Manufacturing Systems*, *56*, 373–391. https://doi.org/10.1016/j.jmsy.2020.06.020

Weidlich, J., & Bastiaens, T. J. (2018). Technology Matters – The Impact of Transactional Distance on Satisfaction in Online Distance Learning. *The International Review of Research in Open and Distributed Learning*, *19*(3). https://doi.org/10.19173/irrodl.v19i3.3417

Xie, H., Chu, H.-C., Hwang, G.-J., & Wang, C.-C. (2019). Trends and development in technology-enhanced adaptive/personalized learning: A systematic review of journal publications from 2007 to 2017. *Computers & Education*, *140*, 103599. https://doi.org/10.1016/j.compedu.2019.103599

Zhang, J., Yu, J., Fu, S., & Tian, X. (2021). Adoption value of deep learning and serological indicators in the screening of atrophic gastritis based on artificial intelligence. *The Journal of Supercomputing*, *77*(8), 8674–8693. https://doi.org/10.1007/s11227-021-03630-w