



Mixed methods approach in researching EFL learners' motivation

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As mixed-method approach has gained renewed interests of researchers, a review toward the use of mixed-method to investigate EFL learners' motivation will contribute as a help for future researchers. The present paper attempts to provide a systematic review by synthesizing research articles related to EFL learners' motivation which used mixed-methods as their research approach. After screening 3,092 research articles on the aforementioned topic, 16 research articles were included into a final systematic map for analysis. An in-depth review shows that questionnaires and sequential explanatory approach are mostly used by the researchers to investigate EFL learners' motivation. Although selected studies were conducted in different countries with diverse theoretical backgrounds, the majority of studies were directed toward university students, resulting in lack of studies on younger EFL learners. The implications for future studies are also discussed for the consideration of researchers in the near future.

Keywords: mixed methods approach, EFL learners' motivation, EFL learning, research instruments

INTRODUCTION

There are several approaches taken by researchers to obtain their data. One of them is mixed method approach. Although it has been argued that combining methods in scientific research has a long history and called with several terms such as 'triangulation method', combining methods, or 'multiple methods' (Maxwell, 2016; Timans et al., 2019), mixed method approach has been gaining popularity in recent years (Ponce & Pagán, 2015; Teddlie & Tashakkori, 2011), especially in the field of education in order to minimize the shortfalls of both quantitative and qualitative methods. In this sense, mixed method approach integrates both quantitative and qualitative methodologies (Hanson et al., 2005). Mixed method approach has been gaining popularity and used by numerous researchers (Creswell & Creswell, 2017; Dunning, Williams, Abonyi & Crooks, 2008).

Although both qualitative and quantitative methods have been refined to avoid certain shortfalls (Cameron & Miller, 2007), each method is not without apparent weaknesses. For instance, although quantitative method can be used to draw a general conclusion or findings for social patterns (Bawks et al., 2022; Bliss, Gallagher, & Perez-Prado, 2003), it has been argued that this method is inflexible, myopic, mechanistic and limited to the realm of testing existing theories (Toor, 2008). On the other hand, despite being beneficial for various exploration and interpretations of data (Polit, Beck & Kluwer, 2018), qualitative approach may leave out contextual sensitivities and pay more attention toward meanings and experiences (Silverman, 2017). Mixed methods approach is created to reduce the weaknesses of both approaches (Salehi & Golafshani, 2010). In addition, integrating both approaches gives readers more confidence in the findings of the studies (O'Cathain et al., 2010) and makes researchers become more certain with their findings (Coyle & Williams, 2000).

OPEN ACCESS

ISSN 2503 3492 (online)

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Received: 9th June 2023

Accepted: 16th March 2024

Published: 30th April 2024

Citation:

Adara, R.A. Ahmad, I.S. Victorynie, I. (2024). Mixed methods approach in researching EFL learners' motivation. *JEES (Journal of English Educators Society)*, 9(1).
<https://doi.org/10.21070/jees.v9i1.1774>

The above points show why mixed methods approach has become more popular than mono method.

Related to its popularity, mixed methods research also seems to be popular for investigating the phenomenon in EFL (English as a Foreign Language) learning (Pardede, 2019). The present study will use the term EFL in lieu of other terms such as ESL (English as a Second Language) or ESOL (English for Speakers of Other Languages) because the present study focuses on investigating studies which analyze teaching and learning phenomena in non-English speaking countries. The limitation is conducted to provide a more focused discussion. Regarding mixed method approach, Lamb (2007) argues that mixed methods approach is suitable for investigating motivation due to the complex nature of motivation. Several studies have used mixed methods approach to investigate motivation (Adara & Haqiyah, 2021; Golaghaei & Arefinezhad, 2015; Kormos et al., 2014). McKim (2017) even argues that numerous studies have attempted to evaluate a mixed methods study but they found no articles which specifically discussed the criteria for measuring a mixed methods article. Furthermore, she argues that it seems important to understand the perceived value of a mixed methods study. Thus, there seems to be an urgency to investigate the use of mixed-method, especially in the field of EFL learners' motivation and its effectiveness for supporting learning.

Nevertheless, there is a lack of studies which specifically investigate the use of mixed methods approach in the investigation of EFL learners' motivation. Thus, the present paper aims to investigate research articles which applied mixed methods approach toward EFL learners' motivation in order to provide deeper insights to researchers who may want to use mixed-method approach in the near future. In addition, the present study will contribute to fill the lack of studies which specifically reviews the use of mixed-method approach for investigating EFL learners' motivation. Such review will provide deeper insights for future researchers.

Following are the research questions for the present study:

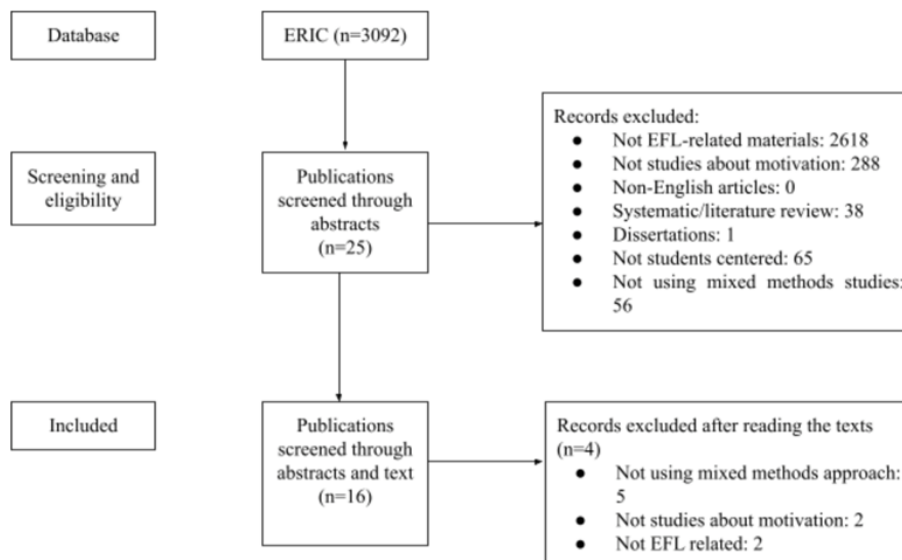
1. How have mixed-methods approaches been used to investigate EFL learners' motivation?
2. What research instruments, motivational variables, and research designs are mostly used to investigate EFL learners' motivation?

METHODS

Research Design

The present study uses a systematic review approach to obtain its data. In this sense, systematic review can be defined as a method to critically appraise, summarize and synthesize the retrieved information (Dempster, 2011; Hanley & Cutts, 2013; Petticrew & Roberts, 2006). It can be said that a systematic review should be able provide critical summary on relevant field by synthesizing existing studies. Therefore, in order to provide focused discussions, the present study applies several inclusion criteria. Firstly, the present study uses research articles which analyze EFL learners' motivation using mixed methods approach, excluding other studies on EFL learners' motivation which only applied quantitative or qualitative studies. Therefore, the keywords used for the present study are EFL learners' motivation mixed method. Secondly, the present study uses ERIC database to look for the prospective studies. The selection of database was based on the availability of studies. Next, only publications in English were included. Because the present study focuses on discussing research articles, it excludes doctoral thesis. In addition, the present study excludes studies which investigate either motivation of teachers or pre-service teachers because it only focuses on EFL learners in order to provide more focused discussions. Besides that, the present study eliminates theoretically-based articles or review articles. The present study only uses studies which were published from 2017 to 2021 to provide discussions from the latest studies. Screening process is discussed in the next section.

FIGURE 1 | Flowchart of selection process



Screening Process

The screening process is conducted through abstract screening in order to find the most relevant studies. After identification and screening processes, the selected research articles go through eligibility process. In the latter stage, research articles are checked based on its data adequacy and writing quality. Eligible research articles must be written in concise and grammatically correct manner. In regards of the above criteria, the initial search in the database using keywords, EFL learners' motivation mixed method, yielded 3,092 research articles. After the selection process, sixteen research articles are included into the reviewing process. [Figure 1](#) describes the identification and selection process of studies for the present study.

RESULTS AND DISCUSSION

The current state of art regarding mixed methods approach for investigating EFL learners' motivation

[Table 1](#) describes an overview of the included publication in terms of authors, year of publication, aims of studies, research setting, data collection methods and summary of relevant findings.

TABLE 1 | Summary of findings

No.	Author, year, country	Aims	Educational levels/research design	Research Instruments (types of questionnaires, e.g online or paper, interviews, etc)/number of participants	Summary of relevant findings
1.	Okay & Balçıkanlı 2017 , Turkey.	The study investigated whether motivation influenced learners' perceptions of teacher/learner responsibilities and learner decision-making abilities.	University/explanatory sequential design	<ul style="list-style-type: none"> • AMTB and a set of questionnaires adapted from Chan, Spratt & Humphreys (2002) (not described). • Open-ended questions. • 144 participants. 	The findings suggest that highly-motivated students consider themselves good or very good in their decision-making abilities than low-motivated ones. Nevertheless, there was no relationship between the levels of motivation and students' perceptions of teacher/learner responsibilities.
2.	Sasaki, Kozaki, Ross, 2017 , Japan.	The study analyzed the effects of various motivational variables on 1,149 Japanese university students' reading proficiencies.	University/explanatory sequential design.	<ul style="list-style-type: none"> • Questionnaires (not described)/1,149 participants. • Secondary Level English Proficiency [SLEP] • In-depth interviews/28 participants. 	The results indicated that despite having similar growth rates in reading ability in the first year, the participants differed in terms of motivation. Students who took extra action outside the required classes to improve their L2 proficiency were ones who belonged to classes with high normative career aspirations among classmates. The findings suggested that despite being less motivated in the beginning, students would be more motivated and take action to realize their language learning goals

3.	Shah, 2017 , Saudi Arabia	This study investigated students' motivation toward EFL learning. Furthermore, the study focused on investigating the effects of learning experience such as teachers' pedagogical practices, group dynamics in the classrooms, and English language courses	University/explanatory sequential design	<ul style="list-style-type: none"> • A set of questionnaires adapted from Guilloteaux and Dornyei (2008) (not described)/300 participants. • Open ended, exploratory interviews/8 participants. 	<p>if they were surrounded by classmates with higher motivation.</p> <p>The findings revealed low levels of motivation among the participants. The findings demonstrate a need to select better quality teachers and recommended the provision of in-service teacher training opportunities which focus on developing motivational strategies for L2 classrooms.</p>
4.	Bui, Man & Teng, 2018 , Hong Kong	The study analysed the motivation of a group of Japanese and English language learners in a summer course at a university in Hong Kong.	University/explanatory sequential design	<ul style="list-style-type: none"> • English learning motivation and Japanese L3 learning motivation questionnaires (not described)/61 participants. • Semi-structured interviews/8 participants. 	<p>The findings showed that the participants perceived L2 English learning as a school subject and a practical tool for academics and career. It was instrumentality, rather than integrativeness, that motivated the students to learn English. On the other hand, they learned Japanese because they had more cultural interest, positive learning experience, self-confidence, and positive attitudes.</p>
5.	Lamb & Arisandy, 2018 , Indonesia	This study investigated how metropolitan youth in Indonesia were using English online, how this related to their global motivation to learn English, and in particular how it related to their attitudes to classroom English lessons.	University/explanatory sequential design	<ul style="list-style-type: none"> • A 56-item questionnaire (not described)/308 participants. • Semi-structured interviews/4 participants. 	<p>The results show that students favor entertainment and self-instruction rather than socially-oriented activities when they learn English online. The results show that students have positive attitudes toward classroom learning.</p>
6.	Jafari Pazoki & Alemi, 2020 , Iran	The study investigated factors that influence engineering students' motivation to learn technical English in ESP courses.	University/explanatory sequential design	<ul style="list-style-type: none"> • Semi-structured interviews/40 participants. 	<p>The findings of this study indicated five motivational components to learn technical English; 1) ideal-self, 2) ought-to-self, 3) instrumentality promotion motivation, 4) learning conditions, and 5) learning</p>

			<ul style="list-style-type: none"> • A 28-item questionnaire adapted from Taguchi, Magid, & Papi (2009) (not described)/152 participants. 	<p>experience. Besides indicating students' negative attitudes and low motivation to ESP learning experience, the findings showed that academic levels influence students' motivation.</p>	
7.	<p>Ma, Wannaruk, Lei, 2019, Thailand.</p>	<p>The study analysed the relationship between EFL learners' motivation and their willingness to communicate.</p>	<p>University/explanatory sequential design</p>	<ul style="list-style-type: none"> • AMTB & L2 WTC questionnaires (not described)/126 participants. • Open-ended questions 	<p>The results indicated high levels of motivation among the participants. However, instrumental motivation was shown to be the most noticeable. In addition, the levels of instrumental motivation had a positive correlation with the participants' willingness to communicate in English. However, the majority of the participants were shown to be more eager to communicate with their friends than teachers because they considered it easier to communicate and understand.</p>
8.	<p>Lee & Lee, 2019, South Korea.</p>	<p>This study investigated the role of the L2 motivational self system on L2 willingness to communicate (L2 WTC) by Korean EFL university and secondary students.</p>	<p>University and high school/explanatory sequential design.</p>	<ul style="list-style-type: none"> • L2 motivational self-system and L2 WTC Questionnaires (not described)/117 participants. • Focus group discussions/9 participants. • In-depth individual interviews/5 participants. 	<p>The findings demonstrated that high school students exhibited stronger <i>ideal L2 self</i> and <i>ought-to L2 self</i>, as well as a higher level of L2 WTC inside and outside the classroom. On the other hand, university students, demonstrated a stronger sense of <i>ideal L2 self</i>, had a higher level of L2 WTC in both communicative settings.</p>
9.	<p>Dağgöl, 2020, Turkey</p>	<p>The study investigated academic motivation and learner empowerment from the students' perspectives and on the probable relationship between them. 150 vocational high school students who took English as a compulsory course constituted the</p>	<p>High school/explanatory sequential design.</p>	<ul style="list-style-type: none"> • Academic Motivation Scale and Learner Empowerment Scale/150 participants. • Open-ended questions. 	<p>The study found a moderate level of perceived learner. Besides that, there is a positive correlation between academic motivation and learner empowerment. In addition, the findings showed a significant relationship between academic motivation and learner empowerment.</p>

		participants of the study.			
10.	Ye, 2020 , China	The study investigated the differences in motivation of higher-achieving, average-achieving and lower-achieving junior secondary students in China.	Secondary school/explanatory sequential design/	<ul style="list-style-type: none"> • Language Learning Orientations Scale-Intrinsic Motivation, Extrinsic Motivation, and Amotivation Subscales (LLOS-IEA) developed by Noels et al. (2000) (online)/773 participants. • Semi-structured interviews/12 participants. 	The findings of Ye's (2019) study showed significant differences and similarities in motivation among the three-group students. While the low-level students showed the highest level of a motivation and were least intrinsically motivated to learn English, higher-achieving students were shown to be extrinsically motivated.
11.	Tusmagambet, 2020 , Kazakhstan.	Applying an experimental study, the study investigated the effects of audiobooks' intervention on the development of reading fluency in terms of reading speed, reading comprehension, and motivation to read among a group of EFL Kazakhstani EFL learners.	High school/explanatory sequential design.	<ul style="list-style-type: none"> • Motivation for reading questionnaires adapted from Wigfield & Guthrie (1997) (not described)/28 participants. • Semi-structured interviews/7 participants. 	The findings showed that the experimental group outperformed the control group in reading speed but there is no difference in motivation levels between both groups. The findings showed that the use of audiobooks may not increase students' motivation but it can improve overall positive attitude and reading comprehension.
12.	Tsai, 2020 , Taiwan.	Using an experimental method, the study investigated the effects of augmented reality technology on students' English vocabulary learning performance and instructional materials motivation.	Elementary school/explanatory sequential design.	<ul style="list-style-type: none"> • English vocabulary tests. • An instructional materials motivation questionnaire adapted from Keller (1997) (not described)/42 participants. • Structured interviews/8 participants. 	The results indicated that the experimental group experienced more improvement in the instructional materials motivation than the control one. Despite the advantages, there are still some obstacles to using augmented reality in the classrooms and teachers must be aware of them before integrating augmented reality to the classrooms.
13.	Ghounane, 2020 , Algeria	The study investigated students' motivation to learn English using academic platforms such as Moodle, Google Classroom, Facebook and Zoom.	University/explanatory sequential design.	<ul style="list-style-type: none"> • A set of online questionnaires/90 participants. • Semi-structured-interviews/8 participants. 	The study compared SNS tools and found Facebook as the most motivating social media for students. However, the study found that participants prefer to use Moodle for teaching and learning activities because

				it allows classroom interaction and teachers' feedback. In addition, the diverse choice of learning management system motivates the participants. The findings indicated that the portfolio-based program improved participants' motivational orientations, especially their self-efficacy and learning control beliefs as well as their L2 listening accomplishment.	
14.	Cong-Lem, 2020 , Vietnam.	The study examined the effects of implementation of a portfolio-based listening course on EFL learners' motivation and skill development.	University/explanatory sequential design.	<ul style="list-style-type: none"> • L2 Listening Motivation Scale (not described)/60 participants. • Listening comprehension tests. • Semi-structured interviews/4 participants. 	The findings of inferential statistics indicated the differences on the feedback types in respect to their effectiveness on learning motivation. In addition, it seems more effective to use emergent feedback than other feedback types when raising learners' learning motivation.
15.	Zarei, Ahour, Seifoori, 2020 , Iran.	The study was a quasi-experimental one which analysed the influences of teachers' oral corrective feedback strategies on learners' learning motivation as well as attitudes and perceptions toward teachers' feedback strategies.	University/explanatory sequential design.	<ul style="list-style-type: none"> • Learning motivation questionnaires adapted from Taguchi, Magid & Papi (2009) (not described)/54 participants. • Semi-structured interviews/21 participants. • Preliminary English test. 	The findings showed that code-switching could minimize the loss of motivation among students. However, the frequent use of code-switching could lead to poor language skills as students rely too much on code-switching.
16.	Sameen, Farid, & Hussain, 2021 , Pakistan	The study investigated the impacts of code-switching on motivation of a group of EFL learners.	University/explanatory sequential design.	<ul style="list-style-type: none"> • A set of questionnaires (not described)/95 participants. • Open-ended questions. 	

[Table 1](#) shows a summary of 16 selected studies which have gone through the screening process. In terms of educational level, university was the most frequently used by the selected studies (n=12) as the setting for their studies. On the other hand, only three selected studies chose high schools and one opted elementary school as their research settings. While all selected studies used questionnaires as their research instruments, eleven studies used interviews (three in-depth interviews, eight semi-structured interviews and one structured interview). On the other hand, four studies used open-ended questions and one study used both focus group discussions as well as semi-structured interviews. Related to the research location, [table 1](#) shows that only four studies were conducted in same countries (Iran and Japan). The rest of selected studies were

performed in different countries in Asia and Africa. Nevertheless, none of selected studies were conducted in Europe. In regards of the size of participants, the majority of selected studies (n=9) can be considered as ones with relatively high numbers of participants as they involved more than 100 participants. The weight of evidence suggests that questionnaires can be considered as the most preferred research instruments for quantitative data collection while interviews, both semi-structured and structured are the most preferred method for qualitative data collection. In addition, selected studies were diverse in terms of research location. Besides that, most selected studies can be considered as large-scale studies as they included more than 100 participants.

In regards of research designs, four studies are quasi-experimental ones in which they divided the participants into experimental and control groups and conducted treatments in certain duration. Those studies conducted tests to the participants before and after the treatment. Two studies tested reading skills while one study tested all skills of English (reading, writing, speaking and listening). In addition, one study tested listening skills. 15 studies applied explanatory sequential designs while one used an exploratory sequential design. In addition, two studies adapted a set of questionnaires from [Taguchi, Magid, & Papi \(2009\)](#). Gardner's AMTB was also adapted by two other studies. In regards of this, four studies created their own questionnaires while 12 studies adapted existing questionnaires. It can be said that an explanatory sequential design seems to be the most preferable design while majority of mixed-method studies toward motivation tend to use adapted version of existing questionnaires than creating one.

Despite investigating motivation and mixed-methods approach as their similarities, each study uniquely analyzed other aspects related to EFL learners' motivation. [Table 1](#) shows that two studies investigated the correlation between motivation and students' willingness to communicate in English [8, 9] while three studies analyzed the effects of technology integration to students' motivation [12, 13, 16]. In addition, several studies examined the impact of motivational variables on EFL learning [4], decision making [2], students' reading skills [3, 11] and decision to learn

English for specific purposes [7]. On the other hand, some studies investigated the impacts of several variables toward learners' motivation such as the effects of portfolio based listening materials [14], corrective feedback [15], and code-switching [16]. Besides that, studies toward motivation can be directed to the comparison between highly-motivated and lowly-motivated learners [1], global motivation as well as attitudes toward EFL learning [6], and the relationship between learners' empowerment and motivation [10]. It can be said that studies toward motivation can be investigated alongside other diverse aspects in EFL learning, indicating the possibilities of more diverse studies related to motivation in the near future.

In regards of motivation aspect, following table describes motivational variables used in selected studies:

[Table 2](#) demonstrates that the ideal L2 self, ought-to-L2 self and learning experience have been mentioned as motivational variables in five studies. On the other hand, two studies centered their analysis on intrinsic and extrinsic motivation while attitudes have been investigated in five studies. Two studies investigated willingness to communicate whereas demotivation and language learning anxiety were analyzed in one study. It can be said that despite the differences in research location and subjects, there are similarities in motivational variables investigated by selected studies.

TABLE 2 | Motivation Variables of Each Selected Study

No	Author, year, country	Motivational Variables
1.	Okay & Balçıkanlı, 2017 , Turkey.	Normative career related aspirations The ideal L2 self Ought-to-L2 self
2.	Sasaki, Kozaki, Ross, 2017 , Japan.	Learning experience Teacher specific motivation Group specific motivation Course specific motivation
3.	Shah, 2017 , Saudi Arabia	Learning objectives Learning process (in and out class) Outcome motivation Decision-making abilities
4.	Bui, Man & Teng, 2018 , Hong Kong	Integrativeness Instrumentality Cultural interest Attitudes toward the L2 Attitudes toward the L2 speakers/community Positive L2 learning experience L2 self-confidence Milieu Global orientation

5.	Lamb & Arisandy, 2018 , Indonesia	Criterion measures The ideal L2 self Ought-to-L2 self Attitudes to classroom learning Self assessment of proficiency
6.	Jafari Pazoki & Alemi, 2020 , Iran	The ideal L2 self Ought-to-L2 self Learning conditions Instrumentality Promotion motivation Learning experience
7.	Ma, Wannaruk, Lei, 2019 , Thailand.	Learning motivation Willingness to communicate Integrative motivation Instrumental motivation
8.	Lee & Lee, 2019 , South Korea.	The ideal L2 self Ought-to-L2 self Willingness to communicate inside the class Willingness to communicate outside the class
9.	Dağgöl, 2020 , Turkey	Intrinsic motivation. Extrinsic motivation Personal reasons Nature of language
10.	Ye, 2020 , China	Intrinsic motivation. Extrinsic motivation Amotivation
11.	Tusmagambet, 2020 , Kazakhstan.	Students' attitudes Reading motivation
12.	Tsai, 2020 , Taiwan.	Vocabulary learning performance Instructional materials motivation
13.	Ghounane, 2020 , Algeria	Learners' motivation Learners' perception
14.	Cong-Lem, 2020 , Vietnam.	L2 listening motivation
15.	Zarei, Ahour, Seifoori, 2020 , Iran.	Criterion measures The ideal L2 self Ought-to-L2 self Attitudes to learning English
16.	Sameen, Farid, & Hussain, 2021 , Pakistan	Learners' anxiety Motivation Demotivation

The present systematic review intended to provide the current state of the art on the use of mixed methods to investigate EFL learners' motivation. In regards of how selected studies applied mixed-methods approach, several aspects will be addressed in the upcoming paragraphs. Firstly, it can be seen that most studies are conducted toward university students. Unfortunately, there is a lack of studies toward younger EFL learners such as ones in early childhood age ranges. In this sense, young learners refer to language learners from 4 to 12 years old. Several factors might be the reasons. [Graham et al. \(2015\)](#) argue that there are some ethical challenges, dilemmas and issues when

conducting research toward children and young people. In addition, as adults, researchers may find it difficult to understand children's position ([Punch, 2002](#)). Those aspects may be the causes of lack of studies toward children's motivation on EFL learning. However, researchers can overcome the obstacles by carefully reviewing the ethical considerations of involving children in their studies ([Graham et al., 2015](#)). In addition, researchers can develop good rapport with children and use appropriate research methods that can help children to be more at ease to communicate ([Punch, 2002](#)). By conducting those steps, there might be more studies toward EFL younger learners' motivation,

especially ones that apply mixed-methods as their approach. Secondly, the selected studies mostly used an explanatory sequential design compared to other types of mixed-method design. In this regard, [Peacock \(2022\)](#) argues that using an explanatory sequential design allows the researchers in language learning field to improve the comprehension toward complex language learning experience. In light of this, the selected studies might opt a mixed-method approach because they consider learners' motivation as something complex.

Related to the research instruments, questionnaires seem to be the most preferable method. However, using questionnaires in research needs to be done with caution. It is because as argued by [Gilham \(2008\)](#), questionnaire has been abused as no other single method has ever experienced it. Despite being favored due to simplicity, it can lead to several problems such as unreliable and unmotivated respondents, superficiality of answers, and overgeneralization ([Dörnyei & Taguchi, 2010](#)). Nevertheless, it is not without merits. Questionnaires can reach a large population and garner a statistical power ([Jones et al., 2013](#)), something which may be difficult to be achieved by other instruments. In order to overcome its weaknesses, it is important for researchers to conduct a pilot study before distributing the questionnaires and perform a thorough analysis of results to ensure the validity of research ([Jones et al., 2013](#)). Nevertheless, the researchers should consider using other research instruments such as observation or journals. Therefore, the researchers may gain more diverse results on EFL learners' motivation.

In regards of the research location, selected studies were performed in various countries. Despite investigating EFL learners' motivation using mixed-method approach, each selected study is totally different. [Beath \(2010\)](#) argues that investigating motivation of different types of learners, settings and variables is important because it will provide more insights on EFL learners' motivation. The results of present study indicate the diversity in research on EFL learners' motivation, showing the interests of researchers toward motivation and the ability of motivation to be paired with various variables and conducted in many research locations. Besides that, the results of present study suggest that an explanatory sequential approach seems to be the most favorable research designs, compared to an exploratory sequential approach. In this sense, explanatory sequential approach refers to an approach in which the researcher follows up the quantitative results with qualitative data while an exploratory sequential approach is one where qualitative findings become the basis of development of quantitative instruments ([Edmonds & Kennedy, 2017](#)). Despite the differences in the sequence of how quantitative and qualitative are administrated to the participants, they are considered easier to be implemented because they facilitate the integration process ([Almeida, 2017](#)). Nevertheless, the researchers still have to consider several methodological issues such as whether quantitative or qualitative approach which has more emphasis in the study, decide the sequence of data collection and how to integrate both approaches.

By considering those aspects, the researchers may gain more insightful results.

In regards of motivational variables, selected studies have included diverse variables from intrinsic motivation to the ideal L2 self. Each variable was proposed by different theories toward EFL learners' motivation. They indicate that researchers of EFL learners' motivation have employed different theories in order to understand the phenomenon. Nevertheless, there is still lack of research toward motivation and writing skills. As one of important English skills, it seems important to explore more about writing skills and motivation. Furthermore, it seems interesting to investigate the effects of technology integration in EFL classrooms toward students' writing skills. It is because the use of technology has been indicated to result in the motivational increase of learners ([Stockwell, 2013](#)). It can be said that in spite of the diversity of theories and variables researched in selected studies, there is still a room for more studies, especially one related to the impacts of technology integration toward EFL learners' writing skills.

Contribution to Mixed Methods Research

The present study provides deeper information toward the use of mixed-method research to investigate EFL learners' motivation. The present study found that a mixed-method approach is rarely used to investigate EFL learners' motivation. There should be more research which apply a mixed-method to examine EFL learners' motivation because it may help researchers to gain insights on a complex phenomenon such as motivation. In order to attract more researchers to use a mixed-method approach, raising awareness toward the benefits seems crucial. The present study can be one of efforts to raise more awareness toward the uses of mixed-method approaches to examine EFL learners' motivation.

CONCLUSION

The results of present study suggest that when using mixed-methods approach to investigate EFL learners' motivation, researchers mostly paired questionnaires with interviews. In addition, the results indicate that researchers mostly use an explanatory sequential design when using mixed-methods approach. In this sense, mixed-methods approach is used to investigate the complicated nature of motivation. In addition the findings suggest that the selected studies investigated various variables of intrinsic motivation. Besides that, the selected studies applied different theories to analyze their premise.

Besides being researched in diverse research locations and using different theoretical backgrounds, selected studies were mostly toward university students, causing a lack of studies toward EFL younger learners. In addition, the results show that there is a lack of studies toward motivation and writing skills. Future studies need to be conducted on younger EFL learners and include the analysis of all

language skills to provide better insights on EFL learners' motivation. Besides that, other research designs such as exploratory sequential or embedded designs need to be involved more to gain more insightful knowledge on motivation.

ACKNOWLEDGEMENTS

We would like to express our gratitude to our respective universities; Universitas Islam 45 Bekasi and International Islamic University Malaysia for the support given during the writing process. We would like to relay our gratitude to our families and friends for their support.

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Conflict of Interest Statement: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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