

# Conducting Undergraduate Research: EFL Students' Perceptions and Practices

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**Abstract**—Undergraduate research has received increasing attention for its potential applications in different domains of EFL contexts, including English language teaching and learning. The purposes of this mixed-methods study were to explore EFL students' perceptions of the importance of conducting research at the undergraduate level and the challenges faced by students when conducting research. The population of the study was EFL undergraduate students studying at a university of foreign languages in central Vietnam. The sample consisted of 200 third-year and fourth-year students majoring in English Language Studies and English Language Teaching. The data were collected through questionnaires and semi-structured interviews. The results show that EFL students were aware of the importance of doing research at the undergraduate level and held positive attitudes towards participating in research as student researchers. In terms of the EFL students' perceived practices of conducting undergraduate research, the findings reveal that the studied EFL students, with or without research experience, were prepared in a variety of ways to conduct research at the university level. However, the findings suggest that the reality of conducting undergraduate research did pose some considerable challenges for these students. The most frequently encountered difficulties included choosing an interesting research topic, developing a theoretical framework relevant to the research objectives, and identifying research gaps after reviewing prior studies. Recommendations are then put forward for EFL students, teachers, and institutions.

**Index Terms**—undergraduate research, EFL students, benefits, challenges, process

## I. INTRODUCTION

In educational contexts, research is not only a subject matter only for educators or teachers, but also a business for students themselves, especially those at higher education levels. Healey and Jenkins (2009) claimed that all undergraduate students in all higher education institutions should experience learning through, and about, research and inquiry. Numerous study results revealed the benefits of undergraduate research, including increased critical thinking, refined communication skills, clearer organizational skills, a healthy sense of self-efficacy and competence, and collaborative learning (Badura et al., 2000; Laursen et al., 2006; Lopatto, 2006; Seymour et al., 2004).

Nevertheless, undergraduate research is not a straightforward task for every student, as several studies point out the barriers and challenges that students encounter when they do research. Papanastasiou (2005) stated that undergraduate students generally tend to think about research methods courses negatively. This negative attitude stems from the difficulties in conducting research, namely the problems of research, the number of given workloads, and students' concerns towards the area under discussion (Hussain et al., 2016). Therefore, there is an urgent need to investigate how undergraduate students think about research and their practices of conducting research to seek effective solutions to students' problems in doing research and foster students' engagement in research in the future.

In the EFL contexts, undergraduate research has received increasing attention for its potential applications in different domains, including English language teaching and learning, second language acquisition, and linguistics. Conducting research on current issues in the EFL fields has been introduced and encouraged among undergraduate students. Despite a large volume of studies investigating EFL students' perceptions of doing research in various contexts (e.g., Elmabruk & Bishti, 2020; Qasem & Zayid, 2019; Yeh, 2009), there has been a dearth of research focusing on this topic in the Vietnamese setting until recently. Even though there have been significant contributions of findings from previous studies in this research strand, it has been long overdue for an in-depth study of the EFL students' perspectives on the necessity of undergraduate research together with their practices. The present study aims to answer the following questions:

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1. What are EFL students' perceptions of conducting undergraduate research?
2. What are EFL students' perceived practices of conducting undergraduate research at their university?
3. What are the challenges faced by EFL students when conducting research at their university?

## II. LITERATURE REVIEW

### A. *Research and Undergraduate Research*

Research is a term that has been defined in a variety of ways; however, they all share certain similarities. McMillan and Schumacher (2001) defined research as “a systematic process of collecting and logically analyzing information (data) for some purposes” (p. 8). Creswell (2008) defined research in a similar but more detailed manner, stating that “research is a process of steps used to collect and analyze information to increase our understanding of a topic or issue” (p. 3). When researchers conduct a study, they follow a certain procedure which primarily consists of six steps (Creswell, 2008; McMillan & Schumacher, 1993) namely, identifying a research problem; reviewing the literature; specifying a purpose and research questions or hypotheses; collecting either quantitative or qualitative data; analyzing and interpreting either quantitative or qualitative data; and reporting and evaluating the research. Conducting research is therefore an important way to improve students' ability to think critically and solve problems, both of which are essential throughout their career (Adebisi, 2022).

The term undergraduate research and its incorporation into the curriculum evolved from US practice, most notably the innovative work of Margaret MacVicar, who founded the groundbreaking Undergraduate Research Opportunities Program in 1969 while serving as dean of undergraduate education at the Massachusetts Institute of Technology (Cohen & MacVicar, 1976; as cited in Healey & Jenkins, 2010). However, Healey and Jenkins (2009) argued that one of the finest definitions of undergraduate research was offered by the University of Gloucestershire as student engagement from induction to graduation, individually and in groups, in research and inquiry into disciplinary, professional, and community-based problems and issues, including involvement in knowledge exchange activities (Childs et al., 2007; as cited in Healey & Jenkins, 2009).

Engaging students in scientific research early in their training programs has been a policy in many higher education institutions (Seymour et al., 2004; Lopatto, 2007). By integrating research into their academic courses, students can strengthen their autonomous critical thinking abilities as well as their oral and written communication skills (Adebisi, 2022).

The development of research skills in undergraduates has therefore been an issue of interest in higher education pedagogy and curriculum. Munthe and Rogne (2015) highlighted that research competence in educators must be acquired in the initial university training. Indeed, university students must understand the discipline in which they are becoming professionals and initiate scientific inquiry as a way of acquiring knowledge and innovation in their disciplinary field (Visser-Wijnveen et al., 2015; Gess et al., 2018).

In the Vietnamese context, scientific research activities, especially at colleges and universities, are emphasized and encouraged for development. Paragraph 1-Article 39: Objectives of Higher Education – Law on Education of Vietnam (2019) prescribes one of the objectives of Higher Education is training a workforce of high qualifications, improving people's knowledge, fostering talents; conducting scientific and technological research to invent new knowledge and products. Therefore, many universities, colleges, and institutions in Vietnam have made efforts to disseminate undergraduate research and encourage students in undertaking research in different disciplines. Research methodology courses are included in many undergraduate curricula to help students develop their research skills. Moreover, there are a few final-year students who satisfy specific requirements could be offered a chance to conduct graduation research projects.

In the context of this research, the targeted participants had offered opportunities to develop their research skills at the university through a course called Research Methodology. Some even had opportunities to engage in research through graduation research projects or university-level research projects in science and technology.

### B. *Benefits of Research Experiences for Undergraduate Students*

On the evidence of results from numerous studies, participating in research projects would considerably benefit undergraduate students in many aspects. Kuh (2003) noted that students involved in their learning process were more capable of having richer, evocative, educational experiences. Therefore, students' engagement in meaningful and practical research not only familiarizes themselves with scientific concepts and techniques, but may also have a substantial impact on students' educational and career paths. Lopatto (2010) claimed that “a good research experience helps one to be a better student” (p. 3). In his research, the reported advantages of research experiences covered increases in a range of discipline skills, study design, information or data gathering and analysis, and information literacy. Additionally, student responses rate their professional growth options, which include academic publishing, joining a learning community, and developing relationships with mentors and peers. It is also worth mentioning that undergraduate students who participated in the research, compared to students without research experience, were discovered to have a greater likelihood of completing their undergraduate studies (Ishiyama, 2002), and proceeding to postgraduate programs (Alexander et al., 2000; Bauer & Bennett, 2003).

Numerous studies have demonstrated that the benefits of undergraduate research extended well beyond academics. These advantages included enhanced critical thinking, improved communication skills, improved organizational abilities, a healthy sense of self-efficacy and competence, and collaborative learning (Seymour et al., 2004; Alderton & Manzi, 2017). Lei and Chuang (2009) also added that things such as “self-confidence, self-efficacy, teamwork, leadership, time-management, and social relation skills” result from the research process, and that these skills are imperative in any future career choice of undergraduate students (p. 4). Healey and Jenkins (2009) pointed out that the learning of research skills relates to cognitive gain and also has the potential to add value to the degree experience by enhancing employability prospects.

These findings lead to the conclusion that students who take part in research at the undergraduate level could gain enormous benefits from research experience when it comes to educational experience, academic achievement, professional development, career path, and other personal skills.

### *C. Challenges Faced by Students When Conducting Research*

Several studies point out the barriers and challenges that students as researchers encounter when doing research. Papanastasiou (2005) stated that undergraduate students generally tend to think about research methods courses negatively. This negative attitude stems from the difficulties in conducting research, namely the problems of research, the number of given workloads and students' concerns towards the area under discussion (Hussain et al., 2016; Sachitra, 2016; Al-Qaderi, 2016). Mapolisa and Mafa (2012) classified 3 main categories of challenges that influence how successful a student's research experience is. They include mentor-student challenges, for example, the engagement between the instructor and student or advisor's availability; student-related challenges such as students' motivation or commitment, and lack of knowledge; and institution-related challenges, namely lack of research materials and workshops to help foster a student's computer literacy or research skills.

These challenges may hinder undergraduate students from engaging in research as well as conducting their research.

In general, despite the benefits that students gain from research experience, there are considerable challenges and difficulties that student researchers might face when conducting research. These challenges would likely demotivate students in the research process and partly influence the quality of their research works if they are not solved timely and effectively.

### *D. Related Studies*

To explore students' perceptions and attitudes towards conducting research, several studies have been conducted with students in different fields of study, including business, medicine, education and TESOL (Alderton & Manzi, 2017; Alghamdi et al., 2014; Imafuku et al., 2015; Jiang & Roberts, 2011; Popovic et al., 2021). For example, in the field of business, Jiang and Roberts (2011) conducted a study to examine the effect of two research-led education methods on students' learning and understanding of research in the context of two university courses in International Business with the participation of 27 third-year undergraduate and graduate students. Through a questionnaire survey, they found that students expressed positive perceptions towards both research-led education approaches. However, many students said they lacked an understanding of the stages needed in conducting research and had difficulty controlling the process, particularly their time management. In the field of medicine, a research study was done by Alghamdi et al. (2014) regarding senior medical students' perceptions, attitudes, and practices toward research at a Saudi Arabian university. This quantitative research involved 172 fourth and fifth-year medical majors in a questionnaire survey. The obtained results revealed that the majority of students considered research crucial in the medical sector, and they found that it helped them improve research skills, get a positive achievement on their resume, and reinforce a teamwork spirit. The underlying reason that prevented the students from undertaking research was mainly due to a lack of professional supervisors, training courses, time, and funds.

In the TESOL field, Elmabruk and Bishti (2020) conducted a study to explore the attitudes and perceived challenges of 52 EFL students at a Libyan EFL Department concerning doing a graduation research project through questionnaires and semi-structured interviews. They found that more than half of the students showed a positive attitude toward their graduation research project, whereas the rest adopted a kind of ambivalent attitude. They also identified the causes of this uncertainty were due to both realistic difficulties, including a lack of resources, insufficient research skills, and supervisory issues; and unrealistic difficulties, namely time limits, fear of public speaking, and difficulties identifying research topics. In a Vietnamese context, Duy (2017) investigated the problems encountered by EFL students throughout the preparatory stage of doing research, together with the reasons and origins of the problems. The research study was carried out at a university of foreign languages in Central Vietnam through questionnaires and interviews. 70 third- and fourth-year students majoring in English were chosen to take part in the study. From the findings, four categories of problems were reported by the students, including problems with selecting topics, difficulties in doing a literature review, challenges in formulating research questions, and lacking the research resources. The difficulties discovered were caused by both students' lack of research skills and research resources.

To summarize, the studies reviewed above yield a range of findings on students' perceptions of and attitudes toward doing research, as well as the practices of undergraduate students performing research in a variety of contexts. Nevertheless, it is worth noting that although many studies focus on exploring the benefits and challenges of research, little research has been done on exploring participants' perceptions and attitudes. Another noteworthy point in these

studies is that the target participants are students with research experience, but little is known about those without research experience. Although there are some studies regarding students’ perceptions of research, attitudes towards doing research or challenges in doing research, the scopes of these studies are rather limited with small sample sizes ranging from 7 to 70 participants. Last but not least, the breadth of these studies in EFL contexts is somewhat limited to the preparatory stage of doing research; there is still a need for further research into the problems Vietnamese students might confront in the whole process of doing undergraduate research. The current research study is, therefore, conducted so as to fill the research gaps mentioned above.

III. METHODOLOGY

This research study is of descriptive design, employing a combined quantitative and qualitative approach to data collection and analysis. A structured questionnaire and in-depth interviews were used as the research instruments.

A. *Participants*

The target population investigated in this research was 200 EFL students majoring in the English language at a faculty of English of a university of foreign languages in central Vietnam. In this study, the chosen participants were third- and fourth-year EFL undergraduate students who majored in English Language Studies and English Language Teaching at a university of foreign languages in central Vietnam. This study targeted these EFL students as they became acquainted with scientific research through a compulsory course called “Research Methodology” as a part of their curriculum in their second year; therefore, they might have a basic understanding of research. Regarding mini-research projects as course assignments and graduation research projects, as they are part of their undergraduate curriculum, students have to submit their projects for marking. When it comes to graduation research projects, however, only students who satisfy two conditions can carry out research projects. The first condition is that the cumulative grade point average of their third year must be good (from 7.0 to 8.4) or above, and the number of retake courses is no more than one course. The second condition is that the grade of the 3rd-year Reading and Writing modules must be at least seven points. Students are offered opportunities to conduct studies within their disciplines, individually or in groups, under the guidance of a mentor.

B. *Research Instruments*

(a). *The Questionnaire*

The first tool used in this study is a structured questionnaire. The questionnaire was developed based on previous findings on students’ perceptions, attitudes, and practices toward undergraduate research by Alghamdi et al. (2014), Alderton and Manzi (2017), and the challenges and problems faced by students in doing undergraduate research by Mapolisa and Mafa (2012), Duy (2017), and Qasem and Zayid (2019). The questionnaire included 46 five-point Likert scale items arranged into five categories, namely (1) EFL students’ perceptions of the importance of conducting research, (2) attitudes towards conducting research, (3) perceived practices of preparation, (4) institutional support for conducting research, and (5) challenges that students faced when conducting research.

TABLE 1  
ITEMS CATEGORIZED IN THE QUESTIONNAIRE

Categories	Items
A. Students’ perceptions of the importance of conducting research	1, 2, 3, 4, 5
B. Students’ attitudes towards conducting research	6, 7, 8, 9, 10
C. Students’ perceived practices of preparation for undergraduate research	11,12, 13, 14, 15, 16, 17, 18
D. Students’ perceived practices of institutional support for conducting research	19, 20, 21, 22, 23, 24, 25
E. Student-related challenges of conducting research	<ul style="list-style-type: none"> <li>• Time: 26, 27</li> <li>• Motivation &amp; Confidence: 28, 29</li> <li>• Choosing research topic: 30, 31</li> <li>• Doing literature: 32, 33, 34</li> <li>• Formulating research questions: 35</li> <li>• Finding related materials: 36</li> <li>• Choosing research method: 37, 38</li> <li>• Dealing with data collection &amp; analysis: 39, 40</li> <li>• Dealing with research results: 41, 42</li> <li>• Other challenges: 43, 44, 45, 46</li> </ul>

(b). *The Interview*

To gain more detailed insights into the participants’ perceptions of the importance of conducting research and challenges in the process of conducting research, 10 in-depth interviews were conducted after the researcher analyzed the data collected from the questionnaires. The interview questions were developed after the researcher collected and analyzed data from the questionnaires. Ten open-ended questions regarding their perceptions of the importance of doing research within their disciplines, their attitudes towards conducting research, and their practices of doing research were

constructed to elicit their best responses. The interview participants included 10 EFL students who had filled the questionnaire survey. However, only students who had experience in graduation research projects and university-level research projects were selected and invited for the interviews because they could provide a more insightful understanding of research and fully share their research experiences with the researcher.

### B. Data Collection Procedure

After piloting the questionnaires, the researchers distributed the revised ones to the English-majored students. Due to the outbreak of COVID-19, the researchers couldn't meet the students in person and deliver the questionnaires to students directly. As a consequence, the researcher had to create an online questionnaire survey using Google Forms and send it to the target students from 8 different classes. The students completed the questionnaires, and the system saved their answers automatically.

A couple of weeks after the questionnaires were analyzed, the researchers deliberately contacted 10 students participating in the survey to invite them to attend the interviews. The researchers arranged both online and offline meetings with them. The interview lasted about 20 minutes for each participant, both in English and Vietnamese. During the interviews, the researchers took notes carefully and used a cell phone to record the answers with the permission of the participants. The interview procedure took place in a week.

### C. Data Analysis

The quantitative data collected from the questionnaires were analyzed by the Statistical Package for the Social Sciences (SPSS) software version 26.0. The Cronbach's Alpha ( $\alpha$ ) was .865. Three types of tests were then applied to analyze the data, including the Reliability Coefficient Test, the Descriptive Statistics Test, and the One-sample T-test. To define whether the analyzed data was high or low from the range from 1 to 5, the researcher based on Moidunny's (2009) scale (Table 2).

TABLE 2  
MEAN SCORE INTERPRETATION

Mean Score	Interpretation
1.00 – 1.80	Very low
1.81 – 2.60	Low
2.61 – 3.20	Medium
3.21 – 4.20	High
4.21 – 5.0	Very high

The qualitative data were analyzed from the recordings and the notes obtained from the interviews. This study followed seven steps of data analysis introduced by Sjöström and Dahlgren (2002) as follows: (1) "familiarization" in which the researchers must read transcripts to become acquainted with empirical facts and gain a perspective of the larger picture; (2) "compilation" of responses to a specific question from all respondents; (3) "condensation" of the individual responses to identify the core component of longer responses; (4) "grouping", in which the researchers classify responses that indicate comparable ways of perceiving the issue; (5) "comparison" of categories in terms of similarities and differences; (6) "labeling" the category to convey its core meanings; and (7) "contrastive comparison" of categories by contrastively comparing the categories, the unique characteristics of the categories and their relationship. Following these steps above, the data were carefully reviewed several times by the researchers, and salient categories were inductively generated.

## IV. FINDINGS

### A. Participants' Profile

Of the 200 EFL students participating in the survey, most of the participants (80.5%) were in their third year of university, while only 19.5% were in their final year. The proportion of females to males was about eight (85%) to one (15%). Regarding their major, it was found that most of the students (84%) majored in English Language Study, while the rest (16%) were English Language Teaching majors.

Besides, it is noteworthy to mention participants' experience in conducting research. Approximately two-thirds of the students (68%) responded that they had engaged in doing research, while only 64 students had no research experience. Regarding 136 students who had experience in doing research, they were required to specify the types of research that they had engaged in. Among 136 students having experience in doing research, the majority of them responded that they did a mini-research project as a course assignment. A small proportion of students conducted other types of research, namely graduation research projects and university-level research projects in science and technology.

### B. Overall Mean Scores of the Five Categories

As highlighted in the methodology sector, the questionnaire consisted of 5 categories. A *Descriptive Statistics Test* was run to check the total mean scores of all items in each category to explore how these different issues were perceived by EFL students. The results of the *Descriptive Statistics Test* were presented in Table 3 below.

TABLE 3  
DESCRIPTIVE STATISTICS ON OVERALL MEAN SCORES OF THE FIVE CATEGORIES

Categories	N	Mean	Std. Deviation	Std. Error Mean
A. EFL students' perceptions of the importance of conducting research	200	3.95	.593	.0419
B. EFL students' attitudes towards conducting research	200	3.67	.677	.0479
C. EFL students' perceived practices of preparation for undergraduate research	200	3.72	.595	.0421
D. EFL students' perceived practices of institutional support for conducting research	136	3.92	.636	.0545
E. EFL students' challenges of conducting research	136	3.38	.682	.0585

The analysis from the One-Sample T-test indicated that the Sig. (2-tailed) (*p*) values of the T-test of the five categories were all less than .005 (with *t* and *df* of 17.828 and 199; 9.835 and 199; 12.261 and 199; 13.263 and 135; and 3.155 and 135, respectively). It follows that most of the participants (*n* =200) who got involved in the study showed positive perceptions and offered the strongest support for the first three categories, with the highest mean score of 3.95 (students' perceptions of the importance of conducting research); the second-highest mean score of 3.72 (students' perceived practices of preparation for undergraduate research) and the lowest one of 3.67 (students' attitudes towards conducting research). In addition, the results show that they seemed to be prepared to do research and received support from their institution. However, the challenges faced by students when conducting research in practice should also be taken into consideration.

C. EFL Students' Perceptions of the Importance of Conducting Research

The responses to 5 statements in the first category of the questionnaire provided the data on EFL students' perceptions of the importance of conducting research in their professional education. The results are presented in Table 4 below.

TABLE 4  
DESCRIPTIVE STATISTICS ON EFL STUDENTS' PERCEPTIONS OF THE IMPORTANCE OF CONDUCTING RESEARCH

Statements	Min	Max	Mean	SD
1. Doing research is indispensable in my professional training at university.	2	5	3.94	.822
2. Research is essential for my professional development at university.	2	5	4.11	.765
3. Research is important for enriching my professional knowledge of the English language.	2	5	4.18	.746
4. Doing research is an undergraduate students' responsibility.	1	5	3.53	.940
5. Research methodology should be a part of the English language curriculum.	1	5	3.97	.879

The results from the first category show that the mean values of the statements "Research is important for enriching my professional knowledge of the English language" and "Research is essential for my professional development at university" were the highest (*M* = 4.18 and *M* = 4.11, respectively). It is interesting to emphasize that the mean value of the item "Doing research is an undergraduate student's responsibility" was the lowest in this group (*M* = 3.53).

The data from the interviews revealed more profound insights into EFL students' perceptions of the importance of conducting research at the undergraduate level, and it also supports the results obtained from the questionnaires. For instance, a student stated:

*"I think university research is essential for students, whether or not they have an intention to pursue further studies in their discipline. For those who intend to study at the postgraduate level, this is essential to help them familiarize themselves with basic research steps, and prepare well for conducting their research in the postgraduate program. On the other hand, for those who do not intend to study at a higher level, scientific research contributes to helping students practice necessary skills for their future jobs, such as information searching and filtering skills, or data processing and analysis"* (Student 8).

Eight out of ten students in the interviews strongly believed that after doing research, they seemed to explore issues in their learning and profession from a critical thinking perspective as they had opportunities to develop their analytical skills such as collecting and analyzing information, problem-solving, and decision-making.

D. EFL Students' Attitudes Towards Conducting Research

To explore their attitudes towards research, the second category was developed with 5 items regarding this matter. The results of the Descriptive Statistics Test were summarized in the following table.

TABLE 5  
DESCRIPTIVE STATISTICS ON EFL STUDENTS' ATTITUDES TOWARD CONDUCTING RESEARCH

Statements	Min	Max	Mean	SD
6. Research is interesting.	1	5	3.58	.984
7. I am interested in participating in research as a student researcher.	1	5	3.63	.999
8. I am confident of conducting my own research.	1	5	3.21	.927
9. Ability to do research is a part of a good university student.	1	5	3.92	.870
10. Undergraduate research experience influences my self-perception as a graduate student in the future.	1	5	4.02	.833

The results indicate that the students showed the highest level of attitude toward the influence of undergraduate research on their self-perceptions as graduate students in the future ( $M = 4.02$ ). It is worth noting that a considerable number of participants held the opinion that the ability to conduct research was an important aspect of being a good university student ( $M = 3.92$ ). However, when it comes to their confidence in conducting their research, this item got the lowest mean score of 3.21.

From the results of the interview, it should be emphasized that the students who had done research at the undergraduate level asserted that there was a change in their attitude after they did their research. More importantly, half of them even decided to continue with postgraduate studies in their chosen professional field after conducting their undergraduate research.

#### E. EFL Students' Perceived Practices of Conducting Research

##### (a). EFL Students' Perceived Practices of Preparation for Undergraduate Research

Table 6 below indicates information about the preparation for student undergraduate research.

TABLE 6  
DESCRIPTIVE STATISTICS ON EFL STUDENTS' PERCEIVED PRACTICES OF PREPARATION FOR CONDUCTING UNDERGRADUATE RESEARCH

Statements	Min	Max	Mean	SD
11. My institution offers courses in doing research for undergraduate students.	2	5	3.82	.794
12. I know from the first to the final steps in the research process.	1	5	3.48	.945
13. I am taught to differentiate between qualitative and quantitative research types.	1	5	3.62	.960
14. I know how to write a research proposal.	1	5	3.64	.972
15. I am provided with research skills training from my institution.	1	5	3.88	.832
16. I am trained for academic writing in English.	1	5	4.05	.759
17. My institution often holds practical workshops, conferences, and seminars on research for undergraduate students.	1	5	3.68	.868
18. I am provided with opportunities to discuss scientific research topics with experienced researchers.	1	5	3.59	.963

The results show that the participants reported to be trained in conducting research at the university level. The most common types of training students received were academic writing in English ( $M = 4.05$ ), followed by research skills ( $M = 3.88$ ), and offered courses in doing research ( $M = 3.82$ ). More than half of those students agreed that practical workshops, conferences, and seminars on doing research were held for undergraduate students by their institution ( $M = 3.68$ ). When it comes to the research process, the mean score of this item is the lowest in this category ( $M = 3.48$ ).

When being asked about the preparation for conducting research, the participants in the interviews offered similar answers in response to a course offered by the institution as a guide for doing research. One student stated, "After finishing the course, students in my class had an opportunity to do a mini-research project instead of taking the final examination. However, in some classes, students are required to write a research proposal only" (Student 3).

More importantly, they were taught how to analyze and evaluate the collected information that is relevant to the subject being studied. Besides, half of the students said that they had learned some research skills through conferences, seminars, or workshops on research taking place at their university.

##### (b). EFL Students' Perceived Practices of Institutional Support for Doing Research

The question items in the fourth category of the questionnaires give information about institutional support for doing undergraduate research at the institution. However, this part was exclusive to the group of students with research experience ( $N=136$ ). The quantitative results show that those students did certainly receive support from their institution in conducting research. The students appeared to get assistance from their supervisors as they gave them detailed guidance ( $M = 4.10$ ) and practical support ( $M = 3.87$ ) in conducting research. In addition, they also obtained benefits from the research methodology course offered by their institution in conducting research, as the mean score of this item is relatively high ( $M = 3.84$ ).

The interview results were in line with the findings obtained from the questionnaires that the participants received considerable support from their institution when they conducted research, especially from their supervisors, the teachers of the faculty of English, and the staff at the institution.

#### F. EFL Student-Related Challenges of Conducting Research

The last category, which consisted of 21 items, focuses on students' challenges in conducting undergraduate research. From the results, the mean score of the item regarding time management was relatively high ( $M = 3.15$ ;  $SD = 1.017$ ). The results from the interviews also revealed that two-thirds of the students had real trouble with time management, which became their biggest challenge in conducting research.

In terms of the lack of motivation and confidence in doing research, approximately more than one-third of students joining the survey considered these challenges ( $M = 3.23$ ;  $SD = 1.102$  and  $M = 3.46$ ;  $M = 3.46$ ;  $SD = 1.154$ , respectively). In addition, the lack of knowledge of the chosen topic was likely a matter of concern, with a mean score of 3.36 ( $SD = 1.023$ ).

Especially noteworthy was the finding concerning the students' challenges in doing literature reviews. Two out of three items concerning this matter got the highest mean scores in the category, with  $M = 3.65$  ( $SD = .891$ ) for the item "I struggle with building a theoretical framework in relation to my research questions" and  $M = 3.69$  ( $SD = .915$ ) for the item "I struggle with identifying gaps of research after reviewing previous studies".

The interview results suggest that doing the literature review was a real challenge mentioned by half of the participants. A student claimed, "My biggest challenge was writing a coherent and logical literature review because I had to think of a reasonable and logical outline to establish a comprehensive theoretical framework for my research. And the problem is that my way of thinking follows a circular pattern, making the literature review illogical. As a result, I spent days reading and fixing it again and again" (Student 9).

In terms of dealing with the research findings, some students in the interview expressed that they found it difficult to report and discuss their findings as they had inadequate training for writing these parts.

## V. DISCUSSION

### A. EFL Students' Perceptions of the Importance of Conducting Research

The obtained results regarding EFL students' perceptions of the importance of conducting research are tentatively positive. The quantitative findings suggest that most of the investigated students with or without undergraduate research experience were inclined to agree on the necessity of research in enriching their professional knowledge in their chosen field and fostering their professional development at the university level. These findings are well-matched with those found by AlGhamdi et al. (2014). This result suggests that conducting research should be one essential element in developing students' profession.

The qualitative data indicate that students who had conducted research seemed to show greater appreciation towards research experiences, as they likely obtained substantial benefits from doing undergraduate research projects. This finding concurred with previous studies which showed that research experience was beneficial for students (Alderton & Manzi, 2017; AlGhamdi et al., 2014; Imafuku et al., 2015; Jiang & Palmela, 2011; Popovic et al., 2021; Yeh, 2009). Similar to previous findings on the additional benefits of doing research, this study found that many students mentioned gains in critical thinking (Alderton & Manzi, 2017; Falconer & Holcomb, 2008), improvement in research skills such as synthesizing and analyzing information (Jiang & Palmela, 2011; Lopatto, 2010; Popovic et al., 2021), and scientific writing skills (Seymour et al., 2004).

### B. EFL Students' Attitudes towards Conducting Research

The findings in this study show that Vietnamese EFL students did not hold negative attitudes toward research. Instead, many of the students thought that research was interesting and showed very moderate interest in engaging in research as a student researcher. This finding is similar to that found by Elmabruk and Bishti (2020). In addition, most of the students agreed that undergraduate research experience influences their self-perception as graduate students in the future. These findings also concur with those of Alderton and Manzi (2017) which showed students majoring in education also took a moderate to strong interest in doing research and their research experience affected their decision to continue graduate studies.

Another striking finding that should be mentioned was the shift in the attitudes of students after doing research. The qualitative data revealed that engaging in and conducting research considerably changed their attitudes as they became more confident and found doing research interesting and useful, which prompted them to consider conducting future research. This result of the study is in line with that of Alderton and Manzi (2017).

### C. EFL Students' Perceived Practices of Conducting Research

#### (a). EFL Students' Perceived Practices of Preparation for Undergraduate Research

It is believed that one of the most fundamental aspects of successfully engaging in or doing undergraduate research as a student researcher is to be adequately prepared for it. According to the obtained data, the majority of students agreed that their institution offered courses in doing research for all undergraduate students as parts of the curriculum, which equipped them with research skills. This finding is not compatible with that of AlGhamdi et al. (2014), Elmabruk and Bishti (2020), and Mapolisa and Mafa (2012). However, it is worth mentioning that the effectiveness of these courses in providing necessary knowledge and skills for students was still in question as the students were not in full



agreement with issues such as knowing steps in the research process, research types, and how to write a research proposal.

*(b). EFL Students' Perceived Practices of Institutional Support for Doing Research*

It is assumed that novice undergraduate researchers could not progress smoothly through every stage of the research process without the support of the institution where they conduct research projects. In this study, the majority of researcher students reported receiving detailed guidance on doing research and practical support from their supervisors, which enabled them to overcome the tough challenges of doing research. This finding contrasts with the result of Mapolisa and Mafa (2012) who found that students faced challenges from the absence of supervisors from their work, which exerted certain negative impacts on the students' capacities to conduct research. It is also crucial to mention the support from the teachers and staff at their university who would provide real help for them as novice researcher students. Another noteworthy issue found in this study was that during the COVID-19 pandemic, the students could not go to the university to find the necessary materials. This raises a big concern about the accessibility of research resources for students in unusual conditions when they had to study and do research online.

*D. EFL Students' Challenges of Conducting Research*

It seemed that the EFL students in this study encountered different challenges; however, the most common challenges were identifying gaps of research after reviewing previous studies, building a theoretical framework in relation to the research question, and choosing a topic of interest to do research. These challenges were comparable to the results of some previous studies conducted in EFL settings by Elmabruk and Bishti (2020), Qasem and Zayid (2019), Duy (2017), and Yeh (2009).

Another finding obtained from the qualitative data was that writing a research report in an English academic style would likely become a challenge for some EFL students. Although the students in this study were English language majors, it did not mean that they could write or do research in English efficiently.

More importantly, it is necessary to note that the extent to which the studied EFL students faced the challenges suggested in the questionnaires was not very strong, as the means of all items just ranged from 2.76 to 3.69 on the five-point scale. This difference might result from the variation in the background knowledge of the students. Among the participants, the fourth-year students might have more opportunities to engage in or do research, while the third year might have their first experience with research.

## VI. IMPLICATIONS

The data gained from the research about the importance of doing research suggest that EFL students should first actively seek and take up any opportunity to engage in or do research related to their major when they are in university. Secondly, they should make meticulous preparation for doing research by determining their research interests and discussing the topics with experienced researchers to get suitable directions before doing research. Third, they should familiarize themselves with the academic environment and build up research skills by taking research methodology courses, attending workshops, seminars, or conferences regarding research or doing research in their chosen disciplines. Fourth, from the challenges of the study, it is necessary for EFL students to acquire a substantial level of English language proficiency, particularly in reading and academic writing. In terms of time management, it is essential for students to acquire a clear understanding of all the steps in the research process to allocate time for each research stage properly and better balance their research, studies, and personal lives.

The findings put forward some recommendations for teachers. First, teachers should find ways to encourage students to get involved in doing research. Secondly, teachers should teach the course of research methodology in a practical and effective way. Finally, teachers should advise and assist students in developing their research abilities during this course by demonstrating the skills or offering practice assignments.

Because undergraduate research is important and beneficial to EFL students, institutions should make greater efforts to disseminate undergraduate research. First, the management staff and faculty members of the institution should pay attention to students who are doing research or have the intention of conducting research. Secondly, seminars and workshops should focus on students' real needs for doing research. Thirdly, the university library should have a greater number of books on research methods and other current materials organized by study area to facilitate students' use of the library when conducting research. Fourthly, because students cannot visit the university library to hunt for resources in the context of online teaching and learning, the institution should digitize existing materials and establish an online database accessible to all university students.

## VII. CONCLUSION

In conclusion, the study results reveal that the EFL students were aware of the importance of doing research at the undergraduate level because of several reasons. The strongest reason was that doing research is an important way to enrich their professional knowledge of the English language, which is their major at university. In terms of the participants' attitudes towards doing research, approximately more than half of the EFL students thought that doing research was interesting, so they showed a positive attitude towards participating in research as student researchers.

When dealing with their perceived practices of conducting undergraduate research, it can be concluded that all the investigated EFL students, with or without research experience, were prepared in a variety of ways to conduct research at the university level. Furthermore, it can be seen that they received support from their institution while doing their research, particularly from their supervisors, faculty, school staff, and library. As regards challenges, the most frequently encountered difficulties included selecting an interesting research topic, developing a theoretical framework in relation to the research objectives, and discovering research gaps after examining prior studies. All of these results make significant contributions to the reality of doing research, particularly perceptions, attitudes, and practices by undergraduate students in EFL contexts.

The study has a number of limitations. Firstly, the scope of this study is still limited to a rather small sample of 200 EFL third- and fourth-year students at only one university; therefore, it could not be generalized for all the EFL contexts where there are practices of undergraduate research. Secondly, there is an imbalance in the number of third-year and fourth-year students, which might have resulted in slight difference in the perception of conducting research because fourth-year students might have more experience. Thirdly, as the questionnaire was written in English and delivered online, it might result in participants' misunderstanding or giving answers that did not express their real viewpoints regarding investigated issues.

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