

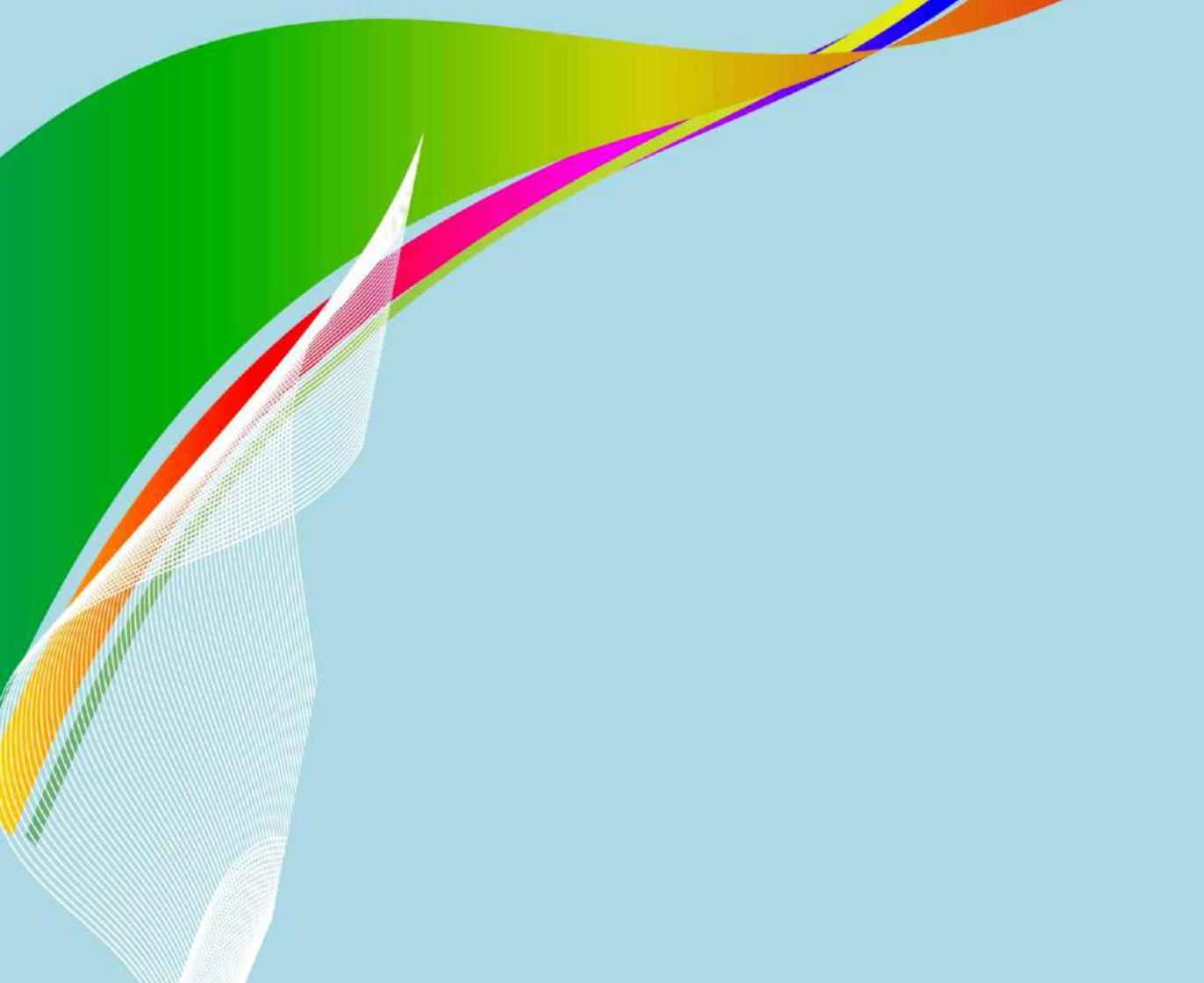
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**How EFL Instructors Improve Their Professionalism:
The Voice from Indonesian Higher Education Institutions**

Hijatul Qamariah¹& Maria Hercz²

¹*Doctoral School of Education, University of Szeged, Szeged, Hungary*

²*Faculty of Primary and Pre-School Education, Eotvos Lorand University, Budapest, Hungary*

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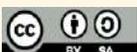
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HOW EFL INSTRUCTORS IMPROVE THEIR PROFESSIONALISM: THE VOICE FROM INDONESIAN HIGHER EDUCATION INSTITUTIONS

Hijjatul Qamariah¹& Maria Hercz²

¹Doctoral School of Education, University of Szeged, Szeged, Hungary

²Faculty of Primary and Pre-School Education, Eotvos Lorand University, Budapest, Hungary

¹Correspondence Email: hijjatulqamariah@gmail.com

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Abstract

Professional development in Indonesia has been widely researched, with much of the focus on secondary school teachers. Some studies have explored professional development among tertiary education teachers, but research on the professional development of English as a Foreign Language (EFL) instructors in higher education in Indonesia remains limited. This gap is significant, given the crucial role of EFL instructors in preparing future English teachers, which demands exceptional professionalism. This research aimed to explore the factors contributing to the professional development of EFL instructors in higher education in Indonesia. The data for this study were collected through semi-structured interviews with ten EFL instructors (five female and five male) from various universities in Indonesia. The interview questions covered topics such as their views on professional development, efforts to improve themselves, participation in professional development programs and activities, personal initiatives, and institutional support. Each interview lasted between 35 and 45 minutes. The data were analyzed using the MAXQDA tool to identify themes from the interview transcripts. The findings revealed several key themes: (1) efforts for PD (2) EFL instructor beliefs (3) EFL instructors' efficacy (4) Less institution support, (5) commitment to the job, (5) classroom practice. The study suggests that institutional support for EFL instructors should be enhanced. Professional development programs should be consistently provided and maintained to ensure their effectiveness and sustainability.

Keywords: Professional Development; EFL Instructor; Higher Education; Professional Identity; Teaching Practice.



A. Introduction

Indonesian higher education has played a significant role in shaping the country's education system (Azra, 2008). However, Indonesian higher education institutions perform poorly on global evaluation systems. Welch (2012) similarly noted that Indonesia's higher education system occupies a peripheral position, with minimal impact on the global knowledge network, particularly when compared to some of its neighboring countries, including Malaysia, Singapore, and even Australia and New Zealand. The weaknesses of Indonesia's higher education system include inconsistent academic quality standards, irregular certification, accreditation, supervision, and monitoring processes, a lack of postgraduate-trained faculty, and limited research output published in internationally recognized journals. Furthermore, many programs are not aligned with workforce skill requirements, resulting in high levels of unemployment and underemployment among graduates (Lambey et al., 2023).

According to Hill and Thee Kian Wie (2012), Indonesia faces significant challenges in meeting the growing demand for higher education. GOI (2012), mentioned that there are approximately 96 state universities and 3000 private colleges and universities across the country, serving over 4.5 million students enrolled in higher education. The most pressing issues include ensuring that lecturers attain a certain level of education and improving the overall quality of the educational process and its outcomes.

Since 2008, a novel remuneration policy for instructors and lecturers has been implemented in Indonesia. Instructors are required to participate in a certification process, and those who successfully complete it receive additional remuneration. The introduction of this payment system is clearly aimed at enhancing incentives, with the expectation that it will positively influence lecturers' performance. However, the sustainability of this policy and the actual impact of these incentive schemes on lecturers' performance remain subjects of debate (Elfindri, et al, 2015; Hadelı et al., 2023).

Diverse policy measures have been implemented to enhance the quality of higher education. Along with mandating professors to attain higher levels of formal education, increasing pay has been identified as a vital



strategy. Indonesian lecturers, who also serve as instructors, earn relatively low salaries compared to their counterparts in neighboring countries such as Thailand and Malaysia, despite having similar levels of education (Filmer and Lindauer, 2001; Grapragasem et al., 2014; (Oussou et al., 2024). Since 2008, a policy has been introduced requiring teachers and lecturers to comply with a certification process, aiming for universal compliance by the end of 2015. Sholihah et al., (2020) mentioned that teacher certification has sparked widespread interest as a way to become a professional teacher who is well compensated. This is also a problem solution for the country to improve its education quality, which begins by offering all instructors the opportunity to develop and strengthen their skills in education.

The goal of the certification policy, along with the associated remuneration schemes, is to ensure a certain level of quality and fairness in higher education. To promote fairness, the certification policy aims to increase lecturer engagement in teaching and research activities while encouraging them to pursue doctoral degrees. This initiative is expected to motivate lecturers to dedicate more time to campus-wide events and reduce involvement in non-productive activities outside the campus. Over time, it is believed that these efforts will gradually improve the quality of teaching and learning in higher education (Hendrawan, 2009).

Teacher professional development has been a significant focus of research over the past decades due to the critical role teachers play in shaping learners' competencies. Desimone (2009) highlighted that a teacher's professionalism is directly linked to student achievement, while Kennedy (2016) emphasized that the primary goal of professional development is to enhance student learning. Teacher Professional Development (TPD) is, therefore, considered essential for improving the quality of education at all levels. Most research on TPD has examined its impact by analyzing student performance at the end of the teaching and learning process. It is widely recognized that students' achievements are strongly influenced by teachers' pedagogical skills. As Burroughs et al. (2019) note, improved student achievement reflects higher teaching quality demonstrated by educators in



the classroom. Professional development and professional learning encompass both formal and informal processes that enable teacher educators to refine their professional practices throughout their careers, ultimately contributing to improved educational outcomes.

Moreover, teachers' professional development is closely intertwined with their professional identity. These two concepts are interdependent, forming a strong and interconnected relationship. Professional identity is an ongoing process in which an individual's unique background, moral and philosophical framework, and achievements define their role within a group or institution (Clarke, Hyde & Drennan, 2013). Teacher Professional Identity (TPI) refers to how teachers define and integrate their professional and personal responsibilities as educators (Zare-ee & Ghasedi, 2014; Masrul et al., 2024). Additionally, TPI encompasses how teachers perceive and think of themselves as professionals, which evolves as they join different communities, interact with others, and navigate various social contexts (Yazan, 2018). The construction of professional identity is deeply linked to the habits that teacher trainers cultivate, shaping their thinking and practical knowledge about what it means to be and act as a teacher (Teng, 2017). A teacher's professional identity is also characterized by their ability to perform and act professionally while collaborating with policymakers, engaging with curricula, and interacting with learners and colleagues (Widodo et al., 2020). According to Kaya and Dikilitaş (2019), it is widely acknowledged that the most critical aspect of teachers' professional development is their ability to understand their own identities and the factors that have influenced the formation of those identities.

Teacher professional development (TPD) is not a new concept used to describe the professional learning of teachers, though it is referred to differently by various authors. Czerniawski et al (2017) defined professional development and professional learning as encompassing both formal and informal processes that help teacher educators improve their professional practice throughout their careers to enhance education. TPD is also associated with changes in instructional practices that increase student learning and



achievement (Desimone, 2009), serve as an essential mechanism for deepening teachers' content knowledge and refining their teaching practices (Desimone et al, 2002), and enable teachers to adopt a more professional approach in their contributions and understanding as future practicing educators. Earlier, Vonk (1991) described professional development as the process of acquiring skills, professional knowledge, values, and personal qualities that allow teachers to continuously adapt within the educational system. In summary, TPD encompasses any formal or informal activities undertaken by teachers to enhance their education, knowledge, and practices, enabling them to become more professional and support their career growth for the betterment of education.

Professional development can be classified into two types: formal and informal (Czerniawski et al, 2017). The formal approach involves teachers participating in structured educational programs with a prescribed curriculum focused on specific subject matter. In contrast, informal learning is typically self-directed and self-initiated, with topics of inquiry chosen based on the personal interests of individual educators. Informal learning also occurs through casual dialogues with experienced professionals or during everyday teaching experiences (Bennett, 2012; Farrell, 2004; Mafulah et al., 2023). Consequently, formal professional development is characterized by a hierarchical structure, while informal professional development is more decentralized.

In-service training refers to the majority of formal professional development events that take place both within and outside schools. These events aim to improve specific aspects of teaching practice, ultimately benefiting the institution as a whole (Osamwonyi, 2016). Such events are often conducted in the form of workshops, conferences, presentations, or seminars. For example, training may focus on introducing or refining teaching methodologies, effective classroom management, integrating educational technology, or conducting classroom-based research (OECD, 2009). In-service teacher development can yield positive outcomes, such as fostering greater cooperation between administrators and teachers by



creating opportunities for collaboration and mutual understanding (Kim, et al, 2019). Additionally, it helps teachers acquire and develop skills that are highly valued by their institutions.

In Indonesia, few English teachers believe that continuous professional development (CPD) is a job outside of the classroom. Their involvement is reportedly limited to the ELT conferences, workshops, and seminars that they frequently attend. Teachers particularly appreciate training from foreign specialists. They contend that these professionals, as opposed to regional teacher educators, support innovative pedagogies (Cirocki & Farrel, 2019). In a study by Wulyani (2017), EFL instructors viewed the implementation of professional development in the Malang district. She found that the needs of EFL teachers to retain their English language and ICT abilities were only partially met by TPD policy and implementation. It needs both support from the personal and institutional levels.

A study by Mu'in et al., (2018) highlighted that, in the Indonesian context, teacher professional development is institutionally mandated and emphasized in the government's educational policies. The 2003 Law on National Education underscores teachers' rights to participate in professional development activities, as does the 2005 Law on Teachers and Lecturers. Furthermore, the 2008 Government Regulation on Teachers recognizes the need to enhance teacher competencies, specifying four core competencies: educational, social, personal, and professional. While this demonstrates significant government support for professional development, there remains a lack of focus and a clear approach by stakeholders to effectively implement these initiatives.

The professional development of teachers is intended to be a crucial step in improving their quality. As professional development is widely regarded as one of the key ways to produce qualified educators, it requires greater attention and commitment from higher education stakeholders.

EFL instructors in Indonesia are often regarded as holding superior positions compared to other educational majors within universities. This perception arises from the advantages associated with expertise in the

English language, such as better job opportunities, higher salaries, and greater access to international events like conferences and seminars. Additionally, English proficiency is a key requirement for securing scholarships to pursue higher education abroad, which gives those with a background in English education a significant advantage. According to RISTEKDIKTI, as reported by *The Jakarta Post* (2015), Indonesia has been working towards developing a bilingual curriculum to teach students in both Bahasa Indonesia and English at universities nationwide. Moreover, English has been a compulsory subject from primary through tertiary education in Indonesia, creating a high demand for qualified EFL teachers. However, the competency of many teachers remains below the baseline level (Wulyani, et al. 2019).

Recently, EFL instructors have faced increasing demands to enhance the quality of English education for future teachers. Changes in the curriculum mean that teachers are required to keep up with the new challenges and create innovation in teaching (Boy Jon et al., 2021). To contribute effectively to the improvement of education in Indonesia, EFL instructors must demonstrate a high level of expertise. This includes possessing strong pedagogical knowledge, teaching skills, and content knowledge. Additionally, they need to enhance their research skills and actively work on maintaining their career growth.

However, EFL instructors in Indonesia still demonstrate low levels of English proficiency. In a study conducted by Lengkanawati (2005) on the English proficiency and readiness of EFL teachers in West Java, it was found that the average TOEFL scores of teachers remained below the minimum standard. Therefore, to improve the quality of English instruction, intensive professional development for EFL instructors is urgently needed.

Research on EFL teacher professional development has been conducted extensively. However, the majority of studies focus on secondary school-level English teachers (Cirocki & Farrell, 2019), with limited research examining EFL instructors at the tertiary level. When such research exists, the participants are often EFL university teachers who are removed from active teaching environments, as they are pursuing further education (Mateus Yumarnamto, 2016), making it challenging to capture real-time teaching situations. The



researchers believe that investigating the professional development of EFL instructors in higher education institutions is critical for improving the teaching quality of future English teachers. Addressing the issues at the root—at the university level—would be a strategic step forward.

Supporting and facilitating EFL instructors' professional development directly contributes to producing high-quality future English teachers. Therefore, this study aims to explore the current state of EFL instructors' professional development in higher education institutions and identify what actions can be taken to support their professionalism. It is hoped that the findings of this research will provide valuable insights for higher education institutions and stakeholders, encouraging them to proactively address EFL instructors' needs, including language proficiency enhancement, teaching skills, research skills, and opportunities for further education.

B. Method

10 EFL instructors agreed to participate in this study. They were selected through the use of a convenience sampling technique. There are five male and five female EFL instructors teaching at universities in Indonesia. There is no special reason to include only five males and five females, but after the invitation for the semi-structured interview was distributed to the groups of English language lectures association, the demographic data was found in such a way. The interviews were conducted between July and August 2023. No specific criteria were applied in recruiting participants; however, those who had been teaching English for approximately four to five years in a university setting were included. This range of experience was considered sufficient for participants to be familiar with the university environment and experienced in teaching English to adult learners. It was also assumed that instructors with this level of experience would have strong confidence in their teaching abilities. All ten participants held M.Ed. or M.TESOL degrees specializing in English language education and applied linguistics, and their ages ranged from 35 to 40 years.

Before the interviews, the researcher provided detailed information about the nature, goals, and significance of the research, as well as the approximate duration of the interviews. Participants were assured of



anonymity regarding their identities and informed of their right to decline participation or withdraw from the study at any time without providing a reason. Written consent was obtained from all participants prior to conducting the interviews.

The interview consisted of two segments. The initial phase focused on gathering background information about the participants. The second segment comprised 30 questions that explored their understanding of teacher professional development, efforts to enhance their professionalism, teaching quality, and commitment to their work. Additionally, the respondents were asked to discuss the construction of their professional identity, the challenges they face in their roles, and the strategies they use to overcome those challenges. The interviews were conducted in English due to the participants' high self-reported proficiency levels and their academic backgrounds in English-related subjects. Each interview lasted approximately 30 to 45 minutes and was audio-recorded using a smartphone to ensure the material could be preserved for future research. All participants completed their interviews by August 30, 2023.

The data obtained from the semi-structured interview were then transcribed. The transcriptions were analyzed both manually and with the assistance of the tool. In the process of analysis, the transcriptions were highlighted and coded. The manual analysis was to find the open coding. This process was not only conducted through manual analysis, but later the transcription was also input on MAXQDA software and reanalyzed, some similarities were found as in the manual analysis. Writing the memos and yielding the codes were consistently conducted. After that, thematic analysis was performed to explore the EFL instructors' perspectives on professional development and their efforts to enhance their professionalism. To ensure the development of appropriate themes, the codes were repeatedly compared with one another. The themes were then reviewed to confirm their alignment with both the extracts and the complete dataset, resulting in the creation of a thematic map. Finally, the researchers determined the final themes and assigned them specific names or labels.



C. Result and Discussion

In this section, the results of the interview are presented. Based on the analysis results, it is found that there are several themes emerged. The themes are related to the efforts that the EFL instructors undertook and conducted, some factors related to consistently improving their professionalism, and some expectations they had about their professional development. This research argues that the data obtained from 10 interview participants highlights the importance of professional development (PD) for EFL instructors in Aceh, Indonesia. However, the findings also reveal a lack of institutional support for enhancing their PD.

1. Result

Through the assistance of MAXQDA software, the analysis was conducted systematically. The memos written during the process helped the researcher identify and assign appropriate codes to each highlighted sentence and phrase. The generated codes were then categorized and organized within the code system. From these groups of codes, the themes were extracted. The MAXQDA analysis revealed that these themes emerged from various codes. Within the overarching topic of EFL instructors' professional development, the themes were formed, focusing on several aspects, including beliefs, efficacy, identity, classroom practice, and institutional support.

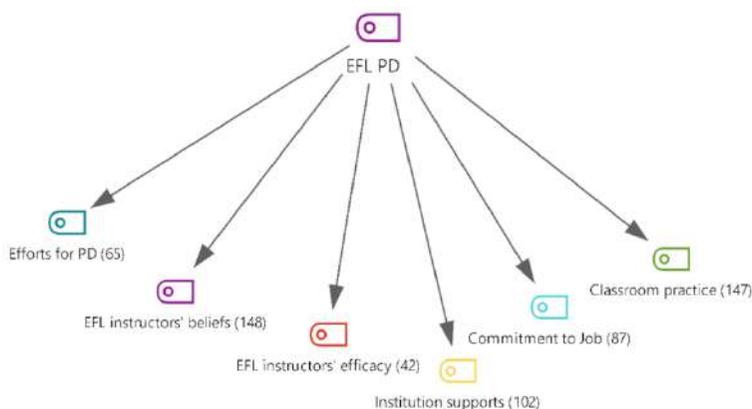


Figure 1. MAXQDA coding analysis

a. Efforts for PD

This theme was created from some sub-codes and codes, in which EFL instructors mentioned several efforts they have tried to improve their professionalism. It also involved some activities and programs they participated in. Thus, the researchers decided these answers as the main themes, efforts for professional development. Regarding this theme, some questions related to what they have done to always develop their professionalism, EFL instructors mentioned many answers. Most of them believed that they needed to continuously enhance their English language proficiency and pedagogical skills. Their efforts in this regard were largely self-initiated, as reflected in the statement made by one EFL instructor.

To improve my Professional development, I always try to find videos on YouTube, of how other people teach EFL like I see how they do in the class, so I can imitate what they do to teach in my classroom, and I also do the research. In doing research of course I read reading materials from that reading I also get to improve my professional development. (EFL I4)

From the excerpt, EFL I4 did not participate in any formal PD programs to enhance her professional development. The activities she engaged in were limited to her daily routine, which included watching teaching videos on YouTube. This was a personal initiative to improve her teaching and research skills. Similarly, all the EFL instructors reported that they enhanced their professionalism by watching teaching videos on platforms like YouTube and Facebook. They agreed that YouTube resources were particularly helpful, as some of the content was directly applicable to their classrooms. However, there were variations in the activities undertaken to improve their professional development. A majority of the EFL instructors mentioned that they also participated in webinars and online workshops, particularly in response to the challenges posed by the COVID-19 pandemic.

As an EFL instructor at the university, I would like to devote myself to being a good instructor here, so to achieve that professional instructor, I will always improve myself by doing some activities, like following or attending seminars, or webinar events and, doing some publications, and improving my English competency. (EFL I2)



In this regard, EFL instructors in Aceh province, Indonesia, emphasized the need to continuously improve by participating in activities that enhance their English language proficiency, teaching skills, and research capabilities. Reflecting on the broader context of EFL instructors in Indonesia, there are two distinct categories based on university status. Instructors at public or government universities benefit from more stable salaries and access to programs designed to support their professional development (PD). In contrast, EFL instructors at private universities often face challenges such as less stable salaries and fewer institutional programs. As a result, they frequently need to seek out opportunities and initiatives for professional development on their own.

b. EFL instructor's beliefs

Some codes related to what the EFL instructors believe to be their principle in doing teaching practice, student-teacher interaction, and another teaching principle that they value were then considered as EFL instructors' belief theme. A teacher's belief is known to play a crucial role in understanding and improving educational processes. These beliefs are closely linked to the approaches teachers use to navigate daily challenges and to their overall well-being. Additionally, they shape the learning environment for students and influence their motivation and overall success in school (OECD, 2009). This study illustrates how teachers' beliefs about themselves, the programs, and their students are reflected in their practices. Most EFL instructors shared varying perspectives on this topic. One instructor, for instance, discussed her English proficiency, expressing that her skills in teaching English were not as strong as those of native or non-native speakers often featured in instructional videos. She stated.

I wouldn't say that I am good enough, because most of the time when I see the videos of other people teaching, well, even though they are native, yes, or either native English or non-native, of course, they are more fluent in English, and I am not. I feel I have nothing when I see how they teach. (EFL I4)

However, she believes that a good achievement of the students can determine the teacher's success in teaching. As she said, "In my opinion

because the students determine the quality of the teacher. If the students perform well, after the instruction, it means the teacher succeeds”.

Others believe that interaction between teachers and students is crucial. When teachers build strong collaboration with their students, the teaching-learning process tends to be more effective. Li et al., (2022) highlighted that teacher-student connections have a more significant impact on instruction at higher grade levels, and positive interactions foster more advanced teaching approaches. One EFL instructor shared that improving his teaching ability involves learning how to manage student behavior, as teaching becomes challenging when students are difficult to handle.

Another noteworthy belief held by the EFL instructor is that professional development is effective when students enjoy the teaching and learning process. As EFL I5 stated in the following excerpt.

I think from the classroom atmosphere, we know that if we have good development in our teaching from the students. If the students enjoy learning English from us, so it means that I have good professional development.

From the excerpt above, we can infer that the EFL instructor evaluates her professionalism based on students' attitudes in the classroom. This perspective aligns with Desimon's (2009) assertion that the primary purpose of professional development is to enhance students' competencies.

c. EFL instructors' efficacy

Efficacy refers to having knowledge in a specific field and the ability to successfully complete tasks. For EFL instructors, efficacy involves their self-assessment of their ability to manage classrooms effectively, engage students, and fulfill their teaching responsibilities (Liu et al, 2021). Therefore, the codes related to what EFL instructors' said about their ability in English language and English language teaching were then considered EFL instructors' efficacy.

The interview results revealed that EFL instructors undergo various levels of learning. They explained that their learning experiences significantly influence their teaching practices. As in the following excerpt, one EFL instructor



shared that his teaching skills improved through his master's education, where he learned how to effectively integrate technology into his teaching.

I feel grateful that when I was in my master's degree I learned about CALL, from theory to practice, so during the pandemic, I only had a mobile phone, and I didn't have a computer at home, so I used a lot of resources whatever I can do, to make the lesson, at least they can access, I mean like they can learn by themselves, it could be in PDF or PPT, I created my own PPT, explaining something, in written text, and audio, and send it to them, and then they replied using WhatsApp group, so I learned that actually from my previous master degree, because at that time I was an assistance of my professor, so at that time we had like an assignment to the students, and the students had to submit to me because I am the assistance, I collected the assignment but that time using email.

They also emphasized that possessing strong English language skills reflects the quality of being a competent English teacher. This is illustrated in the following excerpt from an EFL instructor.

I believe each EFL instructor has their capabilities, or proficiency, and competence and I believe myself to have some capabilities, especially in writing, for the academic one, because I have published some articles, in reputable journals, and I believe I have the skills, in that area and maybe other people can consider me as a good reputable writer.

She believed that being a skilled academic writer and successfully publishing her research in a high-quality journal demonstrated her competence as an English teacher.

Other EFL instructors appeared to have low teacher efficacy, not only in their teaching skills but also in their English language proficiency. They shared that they continuously strive to improve their language skills, particularly by accessing English language learning videos on online platforms.

d. Less Institution support

Based on the codes group in the codes system, about the PD programs and the involvement of the third party in facilitating the EFL instructors in developing their professionalism, the themes about less institution support represented almost all the answers of the EFL instructors.

When it comes to the availability of programs at the university, there was one unanimous response. All participants agreed that the university does not provide any professional development (PD) programs. Apart from basic facilities, there is no additional support offered. Some EFL instructors argued that, because they teach English at vocational universities where English is considered only a general subject, their role is not highly valued by the university. This, in turn, impacts students' motivation to learn English. As illustrated in the following excerpt,

because English is not the focus of our universities, it's only a little subject, a small subject. Well, yes, English is an obligatory subject that must be taken by the students, but they don't put too much effort into it. So that's why the motivation of the students to learn English is very low because the university focuses more on major subjects, not general subjects. So that's why they lack motivation to learn English. (EFL I4)

Others noted that universities only provide support in the form of facilities, not programs aimed at enhancing EFL instructors' professionalism. As a result, instructors must take the initiative to develop their professional skills independently. However, some EFL instructors also mentioned that universities support their development by offering opportunities to participate in programs provided by the Ministry of Research and Higher Education, as well as chances to pursue further studies.

The university gives us open room and time, to attend or to follow some events that are contributed by the ministry in education, so I think by attending and following some activities like programs kampus mengajar, or praktisi mengajar, as well as MSIB, we can improve and enhance our ability in teaching as well as in social interaction (EFL I2)

However, one EFL instructor argued that the institution appears to neglect programs aimed at improving or maintaining the quality of its instructors. While the university expects instructors to excel and bring recognition to the institution, it has yet to provide any supportive programs to achieve these goals.

I think they must be more serious, yeah to increase our quality in English, so they must support, but the institution does not provide. For example, support the facilities in the teaching-learning process, how to create modules, how to



create articles, increase salary give funds to publish the articles. How to publish the book and then we need finance, so they should support the finance. But never support. It's difficult to get support from the institution. (EFL I6)

e. Commitment to job

From the MAQXDA analysis, the codes about the motivation to stay in the job, and spiritual values that make the EFL teachers continue learning and commit to the job become the theme of commitment to the job. This theme is related to the reasons and factors that make the EFL instructors assured about staying in their profession.

Commitment to the role of an EFL instructor may vary, but those with specific motivations for entering the profession tend to remain consistent in their dedication. This commitment often begins long before they start their teaching careers, dating back to when they decided to study in the English education department with the goal of becoming future English instructors. Their purpose has remained consistent – to make a positive impact on many students in English education. As most EFL instructors mentioned.

That's the only motivation that I have, nothing that we can categorize as motivation except the impact. One time I realized that when I taught a student in the classroom, 3 years after I met this student and she told me that she had become a teacher, and she said I use your technique and knowledge, I like the way how you teach, it will make me proud, so that's the only thing that makes me stick on my job now. (EFL I3)

However, for some EFL instructors, their commitment to the profession is driven by other motives. One instructor described teaching as a sacred job but noted the significant workload beyond teaching, such as preparing extensive documentation for accreditation and handling administrative tasks unrelated to teaching. Others mentioned that personal factors, such as family responsibilities, influence their decision to remain in the profession, as they have limited opportunities to secure a more privileged position than that of a teacher.

Sometimes I want to leave this job I think because it is a monotonous job. It's so boring, but I have responsibilities to my family. I think that's the main factor that we are staying here. And as humans, we feel bored. If there is a better job outside maybe I will try. (EFL I1)

However, most EFL instructors stated that salary is not the primary reason they remain in the profession, as it is insufficient to fully support their daily needs. Instead, their biggest motivation comes from the positive impact they can have on others, which drives their strong commitment to their roles as EFL instructors. One instructor also shared that teaching English has become her passion and a part of her soul, and she truly loves the job. As she expressed in her statement below:

I feel better after teaching. So, it's also not about money. Sometimes, when I feel bad, I feel unhealthy, but after teaching I feel healthy, I don't know why. Sometimes during holidays, I feel bored, I feel my body is unhealthy, stomachache, not happy, but when the new semester begins, I get the spirit back. (EFL I4).

f. Classroom practice

Classroom practice is considered one of the themes in this analysis since it is related to the professional development of the EFL instructors in handling the classroom and teaching with great approach and method. When discussing their classroom practices, EFL instructors provided varied responses. Some admitted that their teaching skills fall short of what is expected from professional EFL instructors.

Most of the time I feel ok with my teaching, I feel that I have taught them, I have taught my students too much, and I think that's enough. I think I believe my students understand what I am saying, but at the end of the class, I gave them a test and post-test, and when I saw the results of the test, what's wrong...? (laugh), unfortunately, the students also maybe not honest. When I ask, do you have any questions, do you understand, they say yes miss, do you have any questions, noo... But when they do the post-test, they are not capable enough to do it. (EFL I4).

They also mentioned that when they enter the classroom, their teaching performance varies – sometimes it is effective, and other times it is not. They noted the lack of a clear standard to measure high-quality teaching. However, they agreed on the need to continuously improve their teaching quality, as the rapid pace of change, increasing demands, and diverse student needs require them to adapt and grow.



...you know when I say my teaching quality, it's weak, because sometimes I feel bad in teaching, but I also cannot all my teaching strategies fail. Sometimes it works, so it's quite tricky to answer this question because there is no such standard to decide whether I have a good quality or but, in my perspective, I can assess myself, probably I still need to learn, study, and improve myself. After all, there are several things that I do in the classroom, like describing the classroom instruction for example, sometimes it doesn't work, sometimes when I learn from other instructors, another speaker, another teacher, or colleagues, I need to learn more, so that's why the conclusion is quite subjective to take. But I think my teaching quality is still weak, and still needs to be improved. (EFL I3).

2. Discussion

According to the interview with the EFL instructors about their professional development and how they improve that professionalism, and also based on the analysis conducted, this study has revealed that the professional development of EFL instructors in Indonesia is a new area that needs to be researched more. This side of the profession has not been elaborated. Previously the PD research in Indonesia was merely focused on EFL teachers in secondary schools (Cirocki & Widodo, 2019) because the teacher educators are considered to already have advanced knowledge in teaching skills. However, EFL instructors, as the primary contributors to shaping future English teachers, represent a crucial element in English Language Teaching (ELT) and professional development (PD) research.

In this study, it was found that most EFL instructors perceived professional development (PD) as a vital aspect that needs continuous attention. They argued that teaching is an evolving profession, with constant updates and new challenges arising daily. Teaching English is particularly demanding, making it essential to develop and enhance knowledge in both teaching and research. This aligns with findings from a previous study by Wulyani (2017), which highlighted the importance of continuous learning for English teachers to keep up with changes and innovations in English language teaching. However, regarding the efforts they make to improve their PD, there are no specific activities outlined for them to follow. Additionally, institutions do not provide dedicated PD programs to support their development.

Consequently, their efforts so far have been self-initiated, driven solely by their personal desire to improve. Similarly, this finding is consistent with Hartono's (2016) research, which revealed that Indonesian EFL teachers often face a lack of institutional support for their professional development.

When discussing institutional support as a sense of community, it is evident that there is no direct support in terms of PD programs for EFL instructors. The institution only provides teaching facilities and opportunities for instructors to pursue further education, such as access to scholarship programs or participation in initiatives offered by the Ministry. This lack of institutional commitment to PD could have serious implications, as neglecting these needs may lead to EFL instructors becoming demotivated and less inclined to excel in their professional abilities.

When it comes to the beliefs held by EFL instructors, many agree that the success of the teaching and learning process depends on the teacher's ability and professionalism. However, they acknowledge that their English language proficiency and pedagogical skills are still lacking and require improvement. Some even expressed feelings of inadequacy when compared to native English teachers. Additionally, they emphasized that fostering positive interactions with students is essential for effective teaching.

Teaching English is a profession EFL instructors deliberately chose when they began their bachelor's education. This passion for teaching has led them to develop a deep love for their work and a commitment to continuously improving their abilities. Altruistic motives play a significant role in this dedication. This finding aligns with a previous study, which revealed that EFL teachers in Indonesia are strongly influenced by altruistic and intrinsic motives in choosing their profession (Mukminin et al., 2017). The study found that their commitment to the EFL profession stems from their devotion to making a positive impact on their students. When discussing other factors that motivate them to remain in their jobs, salary is not a primary consideration. It is widely acknowledged that Indonesian teachers are underpaid. However, their job satisfaction comes from the meaningful experience of seeing their students succeed.



The teaching quality of EFL instructors is often reflected in their classroom practices. Some instructors admitted that their classroom practices were not always effective, especially when considering student evaluations. They noted that while some teaching strategies worked well, others failed to achieve the desired outcomes. This, they explained, is because teaching English to students whose first language is not English presents significant challenges. However, other instructors expressed confidence in their teaching, stating that their methods were effective and appropriate for university students.

Based on the findings of this research, it is believed that EFL instructors in Indonesia have tried their best to improve their professional development. They are self-motivated to continue their learning because they believe that to keep up with the innovation and be able to solve new challenges in English language teaching, they should keep learning. Many have chosen online platforms as a means to facilitate their learning, making this a key part of their professional development efforts. Additionally, for higher education institutions to better support EFL instructors, they should focus on enhancing instructors' English language proficiency and providing access to more robust professional development programs. Improving professional development requires initiatives not only at the individual level but also at the institutional level.

Based on the findings of this study, the professionalism of EFL instructors in Indonesia not only impacts the quality of English language teaching at the national level but also has consequences for the competitiveness of Indonesian higher education in a global context. As the demand for qualified English language instructors continues to rise worldwide, strengthening the professionalism of EFL instructors in Indonesia can enhance the contribution of Indonesian academics to the global knowledge network (Welch, 2012). Improved English language instruction will lead to increased competence among university graduates in international communication, better preparing them to compete in the global labor market across various sectors, including education, business, and industry (Hill & Wie, 2012).

Furthermore, the lack of institutional support for the professional development of EFL instructors in Indonesia has the potential to widen the quality gap in higher education between Indonesia and other Asian countries, such as Malaysia and Singapore, which have already adopted policies to enhance the quality of educators through various certification programs and continuous training initiatives (Filmer & Lindauer, 2001; Grapragasem et al., 2014). In a global context, countries with stronger higher education systems tend to be more attractive to international students and academic partnerships, ultimately strengthening their position in international academic networks (Lambey et al., 2023; Hadeli et al., 2023).

The importance of professional development for EFL instructors is also closely related to international trends in language education. According to Desimone (2009), teacher professional development directly contributes to improving student learning outcomes, which ultimately raises global educational standards. Similarly, Kennedy (2016) emphasized that the effectiveness of professional development programs should be measured by their impact on student achievement. Therefore, ensuring that EFL instructors in Indonesia have access to high-quality professional development programs will not only strengthen the domestic education system but also support Indonesia's competitiveness in global education.

As part of the international education ecosystem, Indonesia cannot overlook the role of EFL instructor professionalism in expanding access to academic publications and research in English (Rüland, 2023). Currently, the number of academic publications from Indonesia in internationally reputable journals remains relatively low compared to neighboring countries (Azra, 2008; Welch, 2012). Enhancing the research and academic writing skills of EFL instructors in English-language publications can contribute to increasing both the quantity and quality of Indonesia's academic output, ultimately strengthening the position of Indonesian scholars in global discourse (Masrul et al., 2024).

Therefore, this study asserts that strengthening the professionalism of EFL instructors in Indonesia not only improves the national education



system but also facilitates Indonesia's integration into the global academic ecosystem. To achieve this, greater commitment is required from higher education institutions and policymakers to provide more systematic and sustainable support for the professional development of EFL instructors.

D. Conclusion

This study seeks to explore the perceptions of EFL instructors in Indonesia. The findings reveal that EFL instructors in Indonesia have gone through various stages in their teaching and professional experiences. They have made numerous efforts to improve their professional development, primarily driven by their own initiative. Despite the lack of institutional programs, they believe that, as EFL instructors, they must never stop learning to grow and maintain their professionalism. Regarding how the EFL instructors improve their professional development, online platforms are the main sources for them to learn. It is mentioned earlier that there were two types of efforts they have done, the personal initiative and institution offer; which are almost none programs available. Considering the personal efforts that they have made following webinars, training sessions, and online workshops to enhance their knowledge. They believe that ceasing to learn would lead to numerous challenges, especially given the diverse demands of teaching the Alpha generation. Additionally, many instructors perceive their English proficiency and pedagogical skills as average, with some even feeling that their English language abilities fall short compared to native-speaker teachers. The efforts they have undertaken to develop their professionalism are influenced by various factors, including their professional identity, motivation, and commitment to the job.

Moreover, when asked about their commitment to their job, several responses emerged. Many expressed pride in being EFL instructors, with most stating that they genuinely love teaching English, despite the modest salary. They view their students' success as a reflection of their own success as teachers. Consequently, they emphasized the importance of fostering strong interactions with their students, as it plays a crucial role in ensuring a smooth and effective teaching and learning process.

Regarding institutional support for professional development, most participants agreed that no specific PD activities are assigned or provided for EFL instructors. Instead, they are often required to handle administrative tasks unrelated to teaching. While universities may provide facilities, they do not offer dedicated PD programs. Additionally, participants noted that pursuing further education, such as a PhD, is not easily accessible. They often have to wait two or three years before obtaining such opportunities.

In classroom practice, most EFL instructors strive to teach English effectively, aiming to prepare their students to become skilled English teachers in the future. However, some instructors face challenges in implementing effective and interactive teaching methods. These difficulties are compounded by the low motivation of students to learn. As a result, many EFL instructors engage in reflective practices to evaluate and improve their teaching. They view reflection as a valuable tool for enhancing their ability to provide better support and guidance to their students.

Furthermore, despite their efforts to engage in professional development (PD) activities and their strong motivation for being EFL instructors, the lack—or complete absence—of institutional support has not deterred them from continuing in their roles. “The show must go on, and we must never stop learning” is a belief that resonates deeply among EFL instructors. However, institutional support to help EFL instructors achieve professionalism in their field must be realized. As a collective community, EFL instructors have the right to institutional support for their professional development. The lack of institutional or stakeholder engagement in supporting PD has significant implications for the quality of English education in Indonesia. Therefore, institutions must prioritize sustaining the quality of instructors and teaching by providing meaningful and impactful PD programs and activities.

Based on the findings of this research, the professional development of EFL instructors is crucial for both English language teaching and their overall professionalism. Neglecting efforts to improve their professionalism could result in a decline in the quality of EFL instructors, negatively



impacting both their language proficiency and teaching skills. It is therefore essential for institutions and stakeholders to provide opportunities and support for EFL instructors to enhance their professionalism. This includes facilitating opportunities to pursue further education and participate in continuous PD programs. For long-term planning, higher education institutions should consider proposing a serious approach to the Ministry of Education to secure better support for EFL instructors. The quality of EFL instructors directly influences the English language proficiency of students in Indonesia. With proper support, Indonesia could elevate its English proficiency level from the low category to moderate or even advanced, fostering a stronger foundation in English language education nationwide.

Bibliography

- Azra, A. (2008). Indonesian higher education: from public good to privatization. *Journal of Asian Public Policy*, 1(2), 139-147. <https://doi.org/10.1080/17516230802094411>.
- Boy Jon, R., Embong, R., Purnama, B., & Safar Wadi, A. (2021). The Challenges of English Language Teaching in Indonesia. *International Journal of English and Applied Linguistics (IJEAL)*, 1(3), 158-168. <https://doi.org/10.47709/ijeal.v1i3.1157>.
- Burroughs, N., Gardner, J., Lee, Y., Guo, S., Touitou, I., Jansen, K., & Schmidt, W. (2019). A Review of the Literature on Teacher Effectiveness and Student Outcomes. In *IEA Research for Education* (Vol. 6, pp. 7-17). Springer Nature. https://doi.org/10.1007/978-3-030-16151-4_2.
- Cirocki, A., & Farrell, T. S. C. (2019). Professional Development of Secondary School EFL Teachers: Voices from Indonesia. *System*, 85, 102111. <https://doi.org/https://doi.org/10.1016/j.system.2019.102111>.
- Cirocki, A., & Widodo, H. P. (2019). Reflective Practice in English Language Teaching in Indonesia: Shared Practices from Two Teacher Educators Iranian Journal of Language Teaching Research. *Iranian Journal of Language Teaching Research*, 7(3), 15-35. <https://doi.org/10.30466/ijltr.2019.120734>.
- Clarke, M., Hyde, A., & Drennan, J. (2013). Professional Identity in Higher Education. In *The Academic Profession in Europe: New Tasks and New*

- Challenges (pp. 7-21). Springer Netherlands. https://doi.org/10.1007/978-94-007-4614-5_2.
- Czerniawski, G., Guberman, A., & MacPhail, A. (2017). The Professional Developmental Needs of Higher Education-Based Teacher Educators: An International Comparative Needs Analysis. *European Journal of Teacher Education*, 40(1), 127-140. <https://doi.org/10.1080/02619768.2016.1246528>.
- Desimone, L. M. (2009). Improving Impact Studies of Teachers' Professional Development: Toward Better Conceptualizations and Measures. *Educational Researcher*, 38(3), 181-199. <https://doi.org/10.3102/0013189X08331140>.
- Elfindri, S., & Rustad, D. (2015). Lecturer Performances in Indonesia's Higher Education System. In *IJAEDU-International E-Journal of Advances in Education*, 1. <http://ijaedu.ocerintjournals.org/en/download/article-file/89350>
- Filmer, D., & Lindauer, D. L. (2001). Does Indonesia Have a "Low-Pay" Civil Service? *Bulletin of Indonesian Economic Studies*, 37(2), 189-205. <https://doi.org/10.1080/00074910152390883>.
- Grapragasem, S., Krishnan, A., & Mansor, A. N. (2014). Current Trends in Malaysian Higher Education and the Effect on Education Policy and Practice: An Overview. *International Journal of Higher Education*, 3(1). <https://doi.org/10.5430/ijhe.v3n1p85>.
- Hadeli, H., Kustati, M., Zulfikar, T., Azmi, H. Al, & Arumugam, N. (2023). Effects of formative tests and communicative grammar instruction on EFL students' oral response ability. *Studies in English Language and Education*, 10(2), 649-667. <https://doi.org/10.24815/siele.v10i2.29544>.
- Hartono, R. (2016). Indonesian EFL Teachers' Perceptions and Experiences of Professional Development. <https://www.proquest.com/dissertations-theses/indonesian-efl-teachers-perceptions-experiences/docview/1793408228/se-2?accountid=17096>
- Hendrawan, S. (2009). Professional Certification for Lecturers: A New Emerging Transformation towards a Better Quality of Higher Education in Indonesia. In Constanze Engel & Martina Pletsch-Betancourt (Eds.), *Emerging Transformation in Higher Education* (pp. 287-297). Institute for Socio-cultural Studies (ISOS). <http://dnb.d-nb.de>



- Hill, H., & Wie, T. K. (2012). Indonesian Universities in Transition: Catching Up and Opening up. *Bulletin of Indonesian Economic Studies*, 48(2), 229–251. <https://doi.org/10.1080/00074918.2012.694156>.
- Kaya, M. H., & D. K. (2019). Constructing, Reconstructing, and Developing Teacher Identity in Supportive Contexts. *Asian EFL Journal*, 21(1), 58–83. <https://hdl.handle.net/20.500.14365/4617>
- Kennedy, M. M. (2016). How does professional Development Improve Teaching? *Review of Educational Research*, 86(4), 945–980. <https://doi.org/10.3102/0034654315626800>.
- Kim, S., Raza, M., & Seidman, E. (2019). Improving 21st-Century Teaching Skills: The Key to Effective 21st-Century Learners. *Research in Comparative and International Education*, 14(1), 99–117. <https://doi.org/10.1177/1745499919829214>.
- Lambey, L., Usoh, E. J., Lambey, R., & Burgess, J. (2023). Challenges and Opportunities to Internationalize the Indonesian Higher Education Sector. In M. Mohiuddin, S. Ed-Dafali, E. Hosseini, & S. Al-Azad (Eds.), *International Business* (p. Ch. 6). IntechOpen. <https://doi.org/10.5772/intechopen.110658>.
- Lengkanawati, N. (2005). EFL Teachers' Competence in the Context of English Curriculum 2004: Implications for EFL Teacher Education. *Teflin Journal*, 16(1), 70-92. <https://doi.org/10.15639/teflinjournal.v16i1/79-92>.
- Li, X., Bergin, C., & Olsen, A. A. (2022). Positive Teacher-Student Relationships May Lead to Better Teaching. *Learning and Instruction*, 80, 101581. <https://doi.org/10.1016/j.learninstruc.2022.101581>.
- Liu, H., Chu, W., & Wang, Y. (2021). Unpacking EFL Teacher Self-Efficacy in Livestream Teaching in the Chinese Context. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.717129>.
- Mafulah, S., Basthomi, Y., Cahyono, B. Y., & Suryati, N. (2023). Exploring Indonesian EFL teacher-student interactions in online learning. *Studies in English Language and Education*, 10(2), 686–703. <https://doi.org/10.24815/siele.v10i2.23804>.
- Masrul, Wicaksono, B. H., Yuliani, S., Erliana, S., & Rasyidah, U. (2024). The Dynamic Influence of Interactive Feedback on Elevating EFL Students' Writing Skills. *Studies in English Language and Education*, 11(1), 133–152. <https://doi.org/10.24815/siele.v11i1.30836>.

- Mateus Yumarnamto. (2016). *Indonesian English Language Teachers' Professional Growth and Changing Identities: An Autoethnography and Narrative Inquiry*. <https://iucat.iu.edu/iub/15948165>
- Mu'in, F., A. A. Y., A. R., & F. R. (2018). Investigating Teacher Professional Development: English Teachers' Learning Activities as Learners. *Asian EFL Journal*, 20(12), 333-369. <https://repositori.uin-suka.ac.id/handle/123456789/12368>
- Mukminin, A., Rohayati, T., Putra, H. A., Habibi, A., & Aina, M. (2017). The Long Walk to Quality Teacher Education in Indonesia: EFL Student Teachers' Motives to Become Teachers and Policy Implications. *Elementary Education Online*, 16(1), 35-59. <https://doi.org/10.17051/eeo.2017.16366>.
- OECD. (2009). *Teaching Practices, Teachers' Beliefs, and Attitudes* (pp. 87-135). OECD Publishing. <https://doi.org/10.1787/9789264068780-6-en>.
- Osamwonyi, E.F. (2016). In-Service Education of Teachers: Overview, Problems and the Way Forward. *Journal of Education and Practice*, www.iiste.org, ISSN7(26). Online. www.iiste.org
- Oussou, S., Kerouad, S., & Hdii, S. (2024). Learner autonomy: Moroccan EFL university students' beliefs and readiness. *Studies in English Language and Education*, 11(1), 116-132. <https://doi.org/10.24815/siele.v11i1.30007>.
- Rüland, J. (2023). When English language matters: Internationalizing PhD research by Indonesian political scientists. *Englisia: Journal of Language, Education, and Humanities*, 10(2), 137. <https://doi.org/10.22373/ej.v10i2.17607>.
- Sholihah, M., Ratnasari, K., Permatasari, Y. D., Muawanah, U., & Fajri, A. N. F. (2020). The Policy of Educators' Certification: An Effort to Improve Quality, Qualification, and Teachers' Competence. *IOP Conference Series: Earth and Environmental Science*, 485(1), 012130. <https://doi.org/10.1088/1755-1315/485/1/012130>.
- Teng, F. (2017). Imagined Community, Identity, and Teaching Chinese as a Second Language to Foreign Students in China. *Frontiers of Education in China*, 12(4), 490-514. <https://doi.org/10.1007/s11516-017-0035-0>.
- Vonk, H. (1991). Some Trends in the Development of Curricula for the Professional Preparation of Primary and Secondary School Teachers in Europe: A Comparative Study. *British Journal of Educational Studies*, 39(2), 117-137. <https://doi.org/10.1080/00071005.1991.9973879>.



- Welch, A. (2012). The Limits of Regionalism in Indonesian Higher Education. *Asian Education and Development Studies*, 1(1), 24–42. <https://doi.org/10.1108/20463161211194441>.
- Widodo, H. P., Fang, F., & Elyas, T. (2020). The Construction of Language Teacher Professional Identity in the Global Englishes Territory: 'We are Legitimate Language Teachers'. *Asian Englishes*, 22(3), 309–316. <https://doi.org/10.1080/13488678.2020.1732683>.
- Wulyani, A. N., Elgort, I., & Coxhead, A. (2019). Exploring EFL Teachers' English Language Proficiency: Lessons from Indonesia. *Indonesian Journal of Applied Linguistics*, 9(2). <https://doi.org/10.17509/ijal.v9i2.20217>.
- Yazan, B. (2018). A Conceptual Framework to Understand Language Teacher Identities. *Journal of Second Language Teacher Education*, 1(1), 21–48.
- Zare-ee, A., & Ghasedi, F. (2014). Professional Identity Construction Issues in Becoming an English Teacher. *Procedia: Social and Behavioral Sciences*, 98, 1991–1995. <https://doi.org/10.1016/j.sbspro.2014.03.633>