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EXPLORING PERSONALIZED LEARNING FEATURES IN AN EFL CLASSROOM: A CASE STUDY IN INDONESIAN HIGHER EDUCATION

Ignasia Yuyun[1, 2, *], Nenden Sri Lengkanawati[3], Ika Lestari Damayanti[4], Fazri Nur Yusuf[5]

[1,2,3,4,5]*English Education, Faculty of Language and Arts, Universitas Pendidikan Indonesia*
[1]*Department of English, Faculty of Humanities and Social Sciences, Universitas Kristen Krida Wacana*

Corresponding author: ignasiayoen@gmail.com,

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Abstract: Leveraging a learner-centered approach in higher education is a prerequisite to complying with the current Indonesian curriculum policy, which promotes student mobility and seamless learning. Thus, implementing personalized learning in the classroom supports learning flexibility by accommodating students' needs, preferences, and interests and promotes student agency. Under the framework of personalized learning features and learning fundamentals, this study aims to investigate how personalized learning features support EFL student learning, particularly in online synchronous and asynchronous EFL classrooms, which have the potential to inspire future research. Through a writing playlist facilitated by a learning management system, this study employed class observations (LMS data analytics, Zoom recordings) and focus group discussions (FGD) involving ten (10) senior students in the English Department, who enrolled in the Curriculum and Technology Design course and participated in an internship program. This selected course offered a critical review writing project as the final assignment. It reveals that personalized learning features, including goal setting, learning tracking, learning phases/instructions, learning support/collaboration, assessment (self-peer-teacher), self-reflection, and voice and choice (flexibility), facilitate EFL students in making, participating in, contributing to, and managing their writing learning. Students reported improved sense of agency, ownership, collaboration, critical thinking, creative thinking, metacognitive thinking, relevance, growth mindset, and self-efficacy. In light of these findings, this study suggests incorporating more digital technologies to leverage and monitor the success of implementing personalized learning in EFL classrooms. In addition, since this study was conducted with a small sample size and a single-institution focus, involving more participants and other English skill classes could enhance the overall depth and breadth of the research findings.
Keywords: *EFL; higher education; personalized learning features.*

INTRODUCTION

Personalized learning emerges from the shift in the education paradigm and advancements in digital technology. This shift from a conventional teacher-centered to a more student-centered learning model revolutionizes the roles of teacher and student in the learning process, providing room for developing student agency and promoting teacher-student collaboration throughout the learning journey. In addition, digital technology advancements accommodate personalized learning instruction to address students' diverse needs, preferences, abilities, and interests. This essential point is urgent in higher education, particularly in Indonesia, to provide more flexibility in implementing the current curriculum policy. This policy promotes students' interests, abilities, and needs in learning (Kebudayaan, 2020) and employs the andragogy pedagogy (Abeni, 2020; Clardy, 2005; Green, 2024; Purwati et al., 2022). To illustrate, senior students can do their internships while taking courses. Additionally, personalized learning provides multifaceted experiences that align with global market demands and meet 21st-

century skills, including critical thinking, creativity, collaboration, communication, information and digital literacy, problem-solving, and other essential life skills (*ISTE Standard*, 2025).

Personalized learning in education has garnered the attention of many scholars worldwide, particularly in the United States of America (Bingham et al., 2018; Pane, 2018; Pane et al., 2017). In contrast, personalized learning practices are still limited in Asia, including Southeast Asia, such as Malaysia, Thailand, Singapore, and Indonesia. However, personalized learning offers considerable potential for growth and inter-university collaborations, although it is in the early stages of development (Kiran et al., 2025). Several studies have investigated the implementation of personalized learning in various contexts to determine the benefits (Magfiroh, 2017; Prabaswara & Ardiani, 2021; Suppasetseree et al., 2023; Yuyun et al., 2024). To illustrate, in Indonesia, the personalized learning model, assisted by interactive multimedia, effectively improves the cognitive learning outcomes of vocational school students because learning is carried out according to students' learning styles, especially in the converging learning style group (learning from text) (Magfiroh, 2017). In higher education, implementing personalized learning also impacts effective learning methods through Educational Data Mining, which helps identify the behavior patterns of students' interests and talents. This information is then analyzed to provide a comprehensive assessment (Prabaswara & Ardiani, 2021). In the Indonesian English as a Foreign Language (EFL) context, personalized learning provides benefits for students' engagement, efficacy, and agency (Yuyun et al., 2024). In Thailand, Thai EFL students demonstrated high levels of student engagement in their listening performance during the COVID-19 pandemic (Suppasetseree et al., 2023). This finding reveals that personalized learning provides benefits for language skill development. To explore the additional benefits of implementing personalized learning in the Southeast Asian EFL classroom, further studies are highly recommended.

On the other hand, possible challenges in implementing personalized learning faced by EFL students in Indonesian higher education include completing tasks and assignments effectively, managing time efficiently, providing support for collaborative work, delivering timely feedback, troubleshooting technical issues, and understanding instructions (Yuyun et al., 2024). Other challenges found in various contexts, such as a poorly defined educational movement (Herold, 2017), an underdeveloped conceptualization (Bernacki et al., 2021; Herold, 2017), unresolved pedagogical tensions (Herold, 2017), and environmental and operational factors (Cemal Nat et al., 2008; Pane et al., 2017). Thus, meticulously crafting EFL courses to maximize advantages may help mitigate potential obstacles by addressing teacher training needs for the implementation of personalized learning.

In the early stages of development, implementing personalized learning features in the EFL classroom can contribute to improvements in learning and teaching. Thus, this essential point becomes the center of the current study. Regarding the features of personalized learning, researchers such as Svenningsen et al. (2018) and Shemshack et al. (2021) have elaborated on the features of personalized learning. These features align with the work of Bray and McClaskey (2016), Crosbie and Kelly (1993), Grant and Spencer (2003), Grant and Basye (2014), Li and Wong (2021), Peng et al. (2019), and Zmuda et al. (2015). They include goal setting and learning tracking, learning phases and instruction, learning support and collaboration, assessment (self, peer, and teacher), self-reflection, and flexibility (voices and choices).

The first feature of personalized learning, which is goal setting or learning tracking (see Appendix 3 and 4), involves learning a core list of critical concepts and skills, with options for additional knowledge based on learners' interests, abilities, and teachers' recommendations (Grant & Basye, 2014). In personalized learning, students are responsible for setting their own learning goals and achieving mastery with guidance from their teacher (Bray & McClaskey, 2016; Grant & Basye, 2014).

Regarding the second feature of personalized learning, learners choose instruction that best supports their learning, with the teacher accommodating students' needs, abilities, and preferences (Li & Wong, 2021). In other words, instructional design is co-constructed by learners and teachers to develop student-driven tasks (Zmuda et al., 2015), connecting to learners' interests, talents, aspirations, and passions to promote greater engagement and independence.

As the third feature of personalized learning in this study, learning support derives from peers (Zmuda et al., 2015), teachers (Svenningsen et al., 2018), tools (Samah et al., 2011), resources (Grant & Basye, 2016), systems (Phobun & Vicheanpanya, 2010), and the environment (Chatti

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& Muslim, 2019). Collaboration among students, peers, and teachers is essential in personalized learning. The teacher serves as an information facilitator rather than a knowledge gatekeeper (Patrick et al., 2013; Rickabaugh, 2016). In a personalized learning environment, teachers provide frequent feedback and offer students an adaptive learning process that facilitates meeting their learning needs (Patrick et al., 2013), allowing them to interact more closely with the material and resources (Svenningsen et al., 2018). Furthermore, learning support from tools and systems provides a unique learning experience for all. For example, Smart Learning Environments (SLE) are needed to support personalized learning by assisting students in achieving their learning goals, such as students' awareness, recommendation, self-reflection, assessment, feedback, and motivation (Chou et al., 2010; Chatti & Muslim, 2019; Peng et al., 2019). Chatti and Muslim (2019) highlighted the need for SLE to support personalized learning by providing systems that foster awareness, recommendation, self-reflection, assessment, feedback, and motivation.

The fourth feature in personalized learning is assessment. Learners experience formative assessments through teacher, self-assessments, and peer assessments throughout a learning unit, as well as summative assessments of products and processes based on established criteria, usually described in rubrics (Grant & Basye, 2014). Regular feedback loops inform students of the effectiveness of their efforts in relation to the goal they are attempting to achieve (Wiggins & McTighe, 2005; Zmuda et al., 2015). In personalized learning, students seek and utilize teacher and peer feedback to support their performance, develop their skills to become self-directed learners with agency (Bray & McClaskey, 2016; Larsen-Freeman et al., 2021), and manage their learning (Zeiser et al., 2018).

Self-reflection, as the fifth feature in personalized learning, is essential. Through reflection, educators and students can develop self-awareness competencies, from identifying strengths to developing clear goals for specific tasks. Besides, through reflection and goal setting (Chou et al., 2010), students are better equipped to take academic risks, learn from their experiences, and tackle the next task more intentionally (Dougherty & Camp, 2021). This self-reflection is manifested in the assessment process, which includes self-, peer, and teacher assessments.

The last feature of personalized learning is flexibility, which refers to students' voice and choice. Student choice empowers students to determine what they want to learn, allowing them freedom and control in the classroom. It gives students the autonomy to determine the route they want to take to learn new skills (Kallick & Zmuda, 2017). Voice refers to students being able to shape and design their learning, co-creating their learning plan or pathway. Giving students a voice may encourage them to share their ideas and understanding, design their project or unit, set goals, and monitor their learning, as well as lead a conference, discussion, or presentation (C. Green & Harrington, 2020). Allowing students to learn at their own pace is a strength and advantage that personalized learning provides. Sturgis and Patrick (2010) and Lee et al. (2018) state that well-designed technology systems enables personalized learning to be operational by monitoring individual progress, suggesting personalized learning paths, and allowing students to move at their own pace. Flexible and anywhere learning opportunities feature dynamic communities that enable learning to extend beyond the traditional brick-and-mortar classroom (Grant & Basye, 2015; Patrick et al., 2013).

Personalized learning in EFL classrooms is essential in accommodating students' learning preferences, needs, and pace to improve English skills (listening, speaking, reading, writing). Senior higher education students often engage in extensive academic writing for their projects. Providing more personalized instruction minimizes writing challenges and leverages students' potential in writing to achieve learning outcomes, offering features such as learning goals, tracking, phases, or instructions, peer assessment, self-reflection, and flexibility. Therefore, in the current study, EFL writing refers to the process of writing a critical review of research journal articles by senior students. Writing the critical review requires students to read the selected text in detail and other related texts to present a fair and reasonable evaluation (Hosseini, 2014). In other words, a critical review is much more than a simple summary (Skene, 2016). Regarding the critical review structure, some studies share similar ideas on critical review writing, including an introduction, summary, body (which typically includes discussion, critique, and evaluation), conclusion, and summary (Davies, 2021; Hosseini, 2014; Skene, 2016).

To further explore the benefits of implementing personalized learning features in the learning context, this study employs the fundamentals of learning proposed by Heritage et al. (2015). The

fundamental of learning refers to how learners achieve the Content Standards during their daily learning opportunities in the classroom. Because of this, they have implications for all aspects of planning and teaching, including content, learning activities and tasks, resources, the language used, the role that both students and teachers take in the learning process, and the classroom culture. These learning fundamentals cover three aspects: making meaning, participating and contributing, and managing to learn (Figure 1).

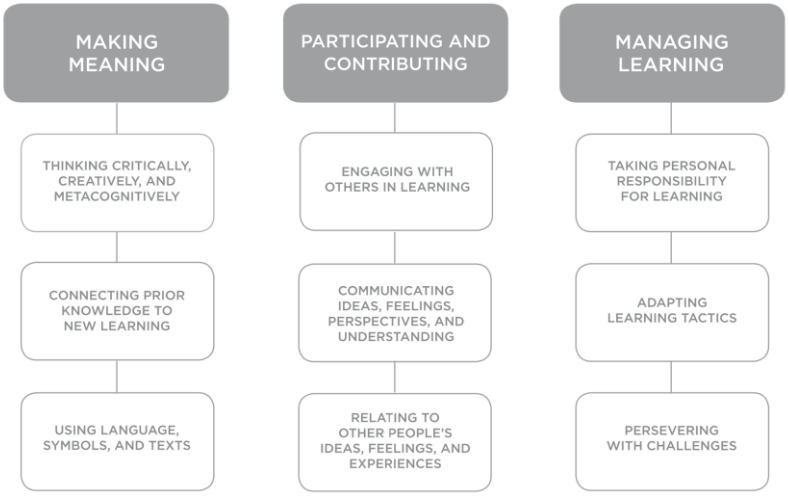


Figure 1. *Fundamentals of learning*

The first aspect of fundamental learning is meaning-making, which involves comprehending and interpreting information, experiences, and ideas through the application of creative, critical, and metacognitive thinking skills. Students can utilize these cognitive abilities to evaluate information, engage in logical reasoning, resolve issues, examine and develop arguments, make informed choices, and manage their learning process. The second aspect is participating in and contributing to learning, which involves engaging with others in the learning process and working cooperatively to acquire information, share and discuss ideas and interpretations, and obtain feedback. Engaging in and actively contributing to learning communities enables students to perceive learning as a collaborative process in which errors are viewed as valuable opportunities for further learning. This aspect aligns with Vygotsky's sociocultural theory of learning, particularly the Zone of Proximal Development (ZPD) concept, which serves as the theoretical foundation for peer collaboration in second-language writing. Thus, this study adopts a modified ZPD model by McLeod and Guy-Evans (2024). Meanwhile, managing to learn requires individuals to exhibit self-direction and demonstrate initiative. Students perceive themselves as proactive and proficient learners who can comprehend, take risks with, and tackle increasingly complex problems while managing their learning. When collaborating with others, individuals can discern when to assume a leadership role, adopt a subordinate position, and when and how to exercise autonomy.

Taking into account some essential points, such as the limited studies in Southeast Asia, particularly in Indonesian EFL writing classrooms, this study formulated the following overarching question to guide the inquiry: How do personalized learning features in LMS-based classrooms facilitate EFL students in critical review writing? This current study can also contribute to the early development of personalized learning in Southeast Asia, as emphasized by Kiran et al. (2025).

METHOD

This study employed a case study that applied class observation and FGD to explore how personalized learning facilitates EFL students' learning, particularly in online synchronous and asynchronous EFL writing classrooms. This study took place at an Indonesian private university, specifically in its English Department and Curriculum and Technology Design course. This selected course offered a critical review writing project as the final assignment for senior students participating in an internship program. Therefore, online synchronous and asynchronous classrooms were integrated to accommodate students' mobility, enabling them to possess remarkable expertise and familiarity with a specific phenomenon (J. W. Creswell & Clark, 2018) and reliability. The lecturer conducted synchronous meetings using a video conference platform, Zoom, and a learning management system (LMS),

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as seen in Appendix 1, which was also employed to facilitate asynchronous meetings.

The study was conducted in the English Department of a private university in Jakarta. This selected university has a more diverse student body, comprising students from various provinces and islands in Indonesia, with different ages (18-20 years old), learning interests, and preferences (multimodal, with different combinations of learning styles: visual, aural, read/write, kinesthetic). The students were required to complete their learning preference and style survey (see Appendix 2). This heterogeneous grouping strategy enables students to learn from one another and engage with others while sharing their skills and interests. Therefore, providing personalized learning instruction that accommodates their learning pace and paths is paramount.

This study employed purposive sampling to select participants, given its information-rich nature and efficient use of limited resources (Patton, 2002). The selection was based on some rationales. First, ten students from the English Department are senior students in Semester 7 who have enrolled in the internship program and taken other courses to follow the Merdeka Belajar Kampus Merdeka (MBKM) curriculum. These senior students need more learning flexibility to accommodate their needs and preferences in completing the courses. Additionally, they are familiar with using the LMS to facilitate their learning. To address recruitment challenges during the internship, this study facilitated the integration of synchronous and asynchronous communication.

This study employed classroom observation and focus group discussion to understand how personalized learning features facilitate EFL student learning. The students were informed of the study's objectives, including its ethical considerations, prior to the classroom observation and focus group discussion. The observation in this study was conducted in two series to increase the reliability of observational evidence, reduce bias, and minimize the risk of missing crucial events during the observation process (Cohen et al., 2007). Firstly, online synchronous sessions were conducted through a video conference application (Zoom), which recorded both individual and class conferences while implementing personalized learning. Secondly, the observation was also conducted asynchronously through LMS analytics, capturing asynchronous activities of critical review writing steps in personalized instruction (Playlist Project).

The focus group discussion was held for ten English Department students at the designated hour, conducted, and recorded online via a Zoom meeting. Instead of a rigorous and formal scenario, the English Department students' responses emerged naturally as if they were conversing. They voluntarily answered questions and contributed their thoughts. The questions were categorized into three: (a) Opening questions to elicit their general learning, such as asking what features of personalized learning they need and why they need to learn critical review writing. (b) Key questions to discover how personalized learning features facilitate their learning and how they support their writing development (Drafting, Revising, Editing, Publishing) in synchronous and asynchronous environments. (c) Closing questions to hear their reflections, such as what they thought was necessary and beneficial to their learning, skills, ability, thinking, mindset, and personality traits; problems and challenges they found in synchronous and asynchronous activities; and what suggestions they might have.

Before collecting data, a proposal for ethics was submitted to the university's ethics committee. This study utilized multiple data collection techniques, as recommended in a case study (Yin, 2018), including observations and focus group discussions. This study also thoroughly examined various data sources, enabling researchers to get a comprehensive contextual understanding of the case, which helps prepare for validation strategies and transferability (Creswell, 2009).

Thematic and open coding were applied to analyze field notes (observation) and focus group discussions. The findings were used to inform how personalized learning features facilitate EFL student learning, particularly in EFL writing. This study encompassed thematic analyses (Creswell, 2015; Miles et al., 2014) involving familiarizing oneself with the data, generating initial codes, identifying themes, reviewing the themes, defining and naming them, and producing the report. The coding process encompassed deductive analysis and inductive analysis to support analytic transparency and help researchers apply concepts from the literature and theory (Bingham, 2023).

RESULTS AND DISCUSSION

The study empowered students through a writing playlist project, where they took the reins in writing a critical review for a research journal. This approach investigated how personalized learning features, such as goal setting, learning tracking, learning phases/instructions, learning

support/collaboration, assessment (self-peer-teacher), self-reflection, and voice and choice (flexibility), facilitate EFL student learning. The learning management system (Moodle) was a key tool in this process, offering a diverse range of educational programs, learning experiences, instructional approaches, and academic support strategies tailored to the distinct learning needs, interests, aspirations, or cultural backgrounds of individual students or groups of students.

Goal setting or learning tracking

This section reports the results of how goal setting or learning tracking in personalized learning facilitates EFL student learning, particularly in writing a critical review. The goal-setting or learning tracking process includes the Personalized Learning Vision to Action Project Planner (PLVAPP) and a weekly progress report. The PLVAPP template is adapted from Zmuda et al. (2015). As seen in Figure 2, the framework provides various components, including design problems or challenges, design processes, pathways, and mindsets. Students were required to complete this action project planner before starting the final project. Meanwhile, as shown in Figure 3, the weekly progress report is designed to track students' weekly tasks, reflections, and self-assessments, and provides teacher feedback or comments.

Name:

Student Number:

Personalized Learning Vision-to-Action Project Planner

MY DESIGN PROBLEM OR CHALLENGE *What is it? Why does it matter?*			
MY DESIGN PROCESS *Generate: How do I approach it? Focus: How do I make sense of it? Ideate: How do I create? Act: Is it working? Build (repeat the cycle as needed): How do I move it forward based on data and/or feedback?* • .. • .. • ..			
MY PATHWAY TO ACTION *What is my plan?*			
WHAT *Task and Resources Needed*	**WHO** *Key Partners*	**WHEN** *Timeline*	**ACHIEVEMENT** *Evidence of Progress*
MY MINDSET			
Relevance *Why do I care? Why does the work matter? Is this the only way?*	• .. • .. • ..		
Growth Mindset *What criteria am I holding myself to? How am I doing right now? How do I feel right now?*	• .. • .. • ..		
Self-Efficacy *Where am I in my process? What are my next steps?*	• .. • .. • ..		
Sense of Belonging *How does this impact my connection with others?*	• .. • .. • ..		

Figure 2. *Personalized learning vision to action project planner*

Weekly Progress Record

Details	
Name	
Student Number	
Semester	
Course Name	

Week #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Goal														
Assignment Name														
Due date														
Goal(s)														
Reflection														
My biggest success														
My biggest challenge														
Assignment Name														
Self-Evaluation (Give score 1-5)														
I followed directions.														
I followed directions.														
I met all requirements.														
I worked collaboratively with others.														
I put forth my best effort.														
Lecturer's Notes														

Figure 3. *Weekly progress report*

The evidence of goal setting or learning track was derived from observation data and focus group discussions (FGDs). The observation data included student and teacher activities in synchronous (video conferences) and asynchronous (LMS) settings. From the LMS, as shown in Figure 4, it was observed that goal setting or learning tracking was provided through the PLVAPP during the synchronous individual conference activity. Meanwhile, the weekly progress report was assigned to students in playlist project paths 1, 3, 4, 5, 8, 9, and 10, as seen in Figure 5. Additionally,

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the teacher can track the progress of students' learning using the LMS feature called Activity Report.



Figure 4. *Individual conference activity in the LMS*

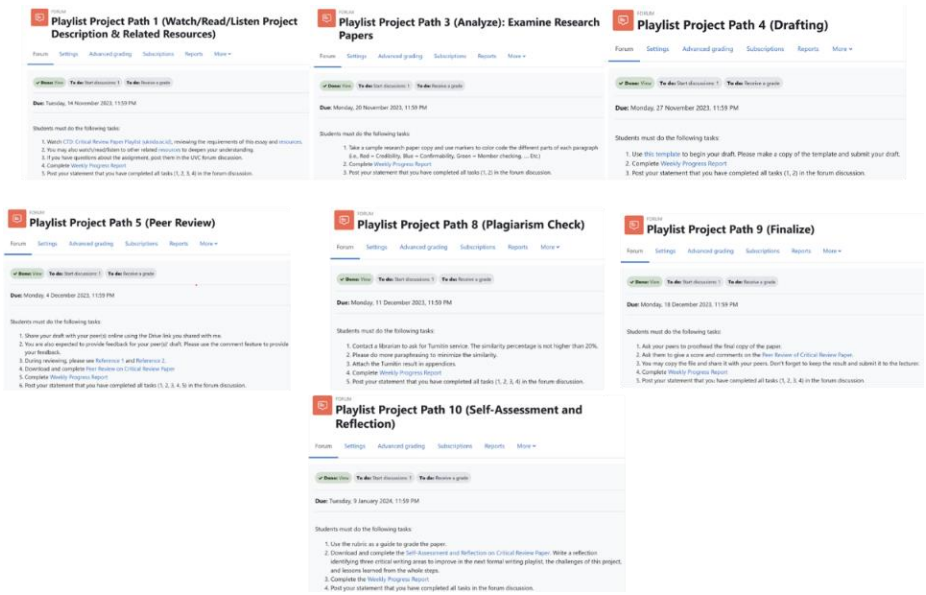


Figure 5. *Weekly progress report activities in the LMS*

As shown in Figure 4, students were required to schedule a synchronous online individual conference to discuss the PLVAPP. The students attended the individual conference at a time that suited them. Since the students were in an internship program, the lecturer provided flexible time slots for the week. Through the individual conference, students got the lecturer's support to brainstorm some writing topics and ideas and draft their PLVAPP. During this session, students were asked to clarify terms they did not understand, phases they had to complete, and assignment requirements they should fulfill. Some benefits of goal setting and learning tracking are also revealed in the FGD. A similar voice, as observed in the class, was also evident in the FGD. To illustrate, it helps the students brainstorm the ideas they want to create (S1).

> Goal setting/learning tracking are helpful for me to brainstorm and determine what I want to do, but I need to be more realistic to follow the plan I previously created. The Personalized Learning Vision to Action Project Planner helps students brainstorm the ideas they want to make. (S1)

The students also found that goal setting and learning tracking encourage them to plan their schedules more effectively, regularly, and in a structured manner, thereby enhancing creativity and making their plans more organized (S2).

> A learning tracker can help us plan our schedule more effectively and regularly. (S2)
> A learning tracker is beneficial because it can enhance our creativity, make our plans more structured, and help us clearly define what we want to do. (S2)

Some students also benefit from goal setting and learning tracking, which monitor learning progress (S5) and support time management. These findings align with the objectives of the weekly progress report, which aims to monitor students' weekly tasks, reflections, and self-assessments, and provide teacher feedback or comments. Besides, the LMS feature of the activity report (see Figure 5) supports these findings.

> …. It is very efficient in terms of brainstorming and the progress of our work. (S1)
> The learning tracker is efficient because it provides positive benefits, such as helping me monitor and review my learning progress. It would be convenient for me to know what I should know about the assignment's materials. (S5)

On the other hand, some students also found some challenges in employing goal setting and learning tracking. For instance, some features were so complicated that they got lost using the provided links (S4). Since they were not accustomed to it, the students required clarification on which goal should be completed and updated (S7). The worst thing is that they inconsistently complete the tasks on time due to their lack of motivation.

> ….but I'm too lazy to fill it out every week as the links are complicated and can be lost/buried by other things. (S4)
> I get confused about which one to complete and update. (S7)

Learning Phases or Instructions

The learning phases or instruction in this study refer to the personalized instruction phases in the Playlist project, which requires students to write a critical review for a research journal. Figure 6 illustrates the learning phases or instructions of the Playlist project, which consists of eleven (11) phases and three individual conferences. The individual conferences were conducted online through Zoom meetings at the beginning, middle, and end of the writing process. The online conferences were organized as the senior students took the internship program.

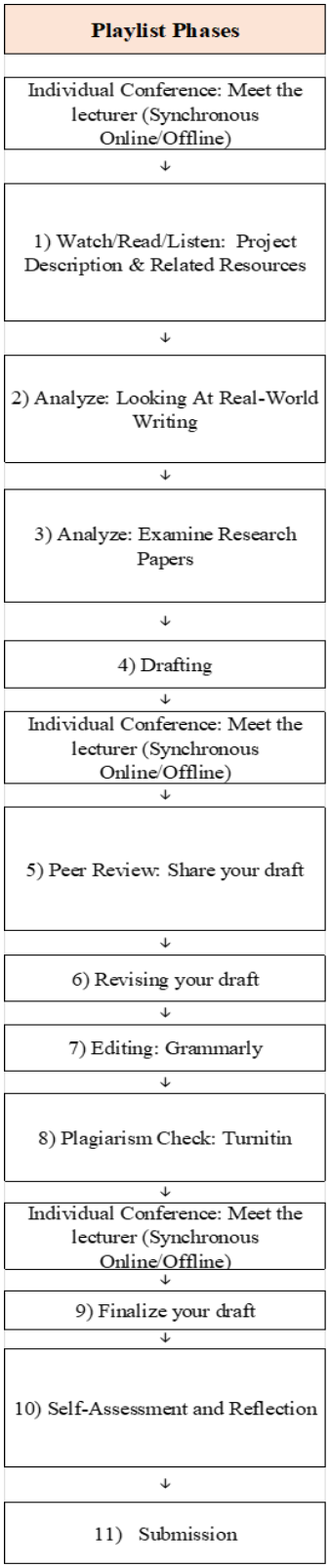


Figure 6. *Learning phases of the playlist project*

As observed in the LMS (see Figure 7), weekly instructions were provided to elaborate on the learning phases or activity instructions of the Playlist project. In this study, the teacher provided a series of learning phases to guide students through the writing project from start to finish. This personalized learning feature is pivotal in

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facilitating student learning, particularly in writing a critical review of journal articles. To illustrate, learning phases or instructions were helpful to some extent, such as brainstorming ideas before writing (S1).

> Learning phases or instructions are helpful at the beginning of the assignment, especially the brainstorming part. (S1)

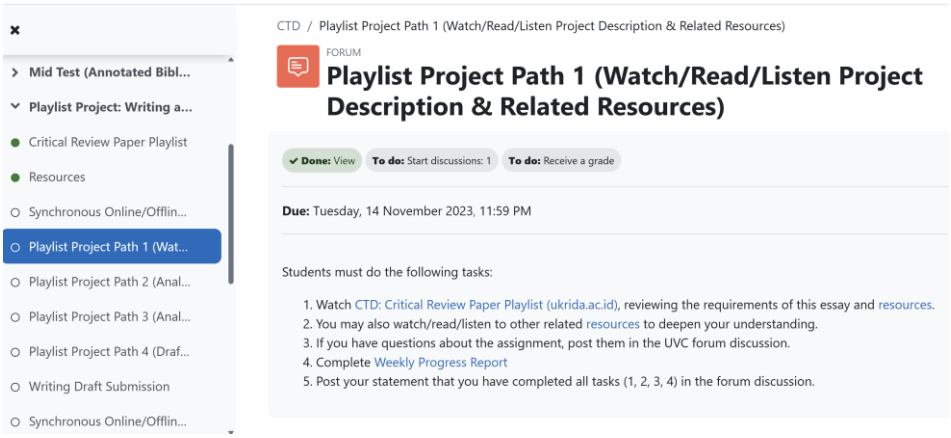


Figure 7. *A sample of the playlist project phase in the LMS*

Students also found that learning phases or personalized learning instruction helped them develop their critical thinking and adaptation abilities (S3). They found new experiences in the learning atmosphere, which differs from their previous classes. This necessitated a more critical approach to any learning steps provided in the LMS and a resilient adaptation to the learning process.

> I think the playlist project can facilitate learning because it is well-organized. The steps from the beginning until the end have already been designed, and we know what to do at every step. (S4)
>
> Regarding the project deadline, I had to check to ensure I didn't miss it. This is very helpful for managing time and staying more organized when working on the project. (S5)

> The instructions provided vary in their features. The explanation feature demonstrates how to do/cope with the challenges in personalized learning. For me, it is to develop our critical thinking and adaptation ability. (S3)

Furthermore, some students perceived that the learning phases or instructions in personalized learning provided a clear and reassuring framework for discussion (S3). The teacher's provision of various step-by-step instructions for learning instilled confidence in students, making it easy to follow the learning phases or instructions from start to finish.

> Overall, the instruction directly facilitates my learning and provides a clear framework for the discussion in the personalized learning features. It is very beneficial for us. (S3)

Since personalized learning also provided good organization of instructions (S4), it helped students manage their time (S5).

Learning supports or collaboration

This section discusses how learning supports or collaboration in personalized learning facilitates EFL student learning. The learning support in this study encompasses collaborative work among teachers, students, tools, resources, systems, and infrastructure.

As observed in the LMS and video recording, teacher-student interaction occurred throughout the entire learning process. The teacher provided an individual video conference (Figure 8) to facilitate a brainstorming session on the writing process. The second individual conference was held during the learning process to provide feedback on the writing process and to discuss any problems or challenges students faced during the writing process. Additionally, the teacher encouraged the students to address any issues or challenges they encountered. The final individual conference was held at the end of the learning period to provide feedback before submission. In this phase, the teacher checked the assignment requirements and assessment criteria.

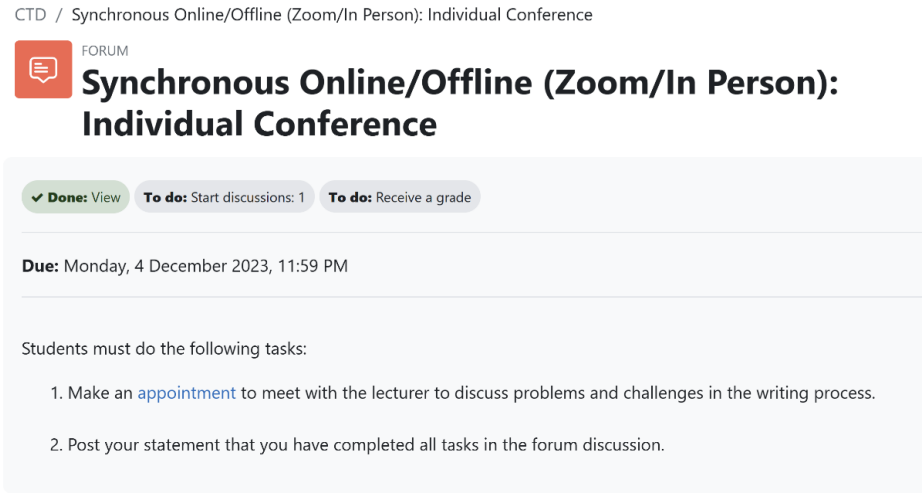


Figure 8. *Individual conference in the middle of learning*

The student (S1) expressed a similar opinion during the FGD. He stated that an individual conference at the beginning of the writing process was helpful. He received clear directions instead of having to read the learning plan or syllabus through the provided templates for learning tracks, playlist phase activities, assessment rubrics, and scoring. These learning supports guide students through a step-by-step learning process. Another student (S4) appreciated the teacher's availability to facilitate an individual conference and provide feedback.

> Collaborating with the teacher facilitates my understanding of clear assignment directions, compared to only reading the learning plan and syllabus. (S1)

> It supports my learning regarding how the teacher facilitates us through Zoom meetings, arranges the time availability, and adjusts the schedule. Those support learning. The feedback given is also helpful. (S4)

Regarding student-student collaboration, through peer collaboration, students received feedback to check their understanding (S8) and work (S3, S8), to share thoughts and opinions (S3), and to motivate them to complete the task (S5). Interestingly, S6 found a room to choose peers who provided feedback.

> Peer collaboration—The feedback from friends is also positive. It is helpful to see what they view from our work after they read the information, to know what to fix to make it more understandable for people who will read it, and to see my understanding. It also motivated me to see if the information was useful for them, to get their recommendation, and to see my understanding. (S5)

> Collaboration with my teacher helps me to understand the material in the LMS further and to know what to improve based on the feedback I receive. (S8)

> It provides a platform for sharing videos, text-based materials, and multimedia resources. It guarantees seamless access to the material. We can also engage with the content at any time and from anywhere to learn it in our spare time. (S3)

Moreover, learning support or collaboration was also obtained from the provided resources, tools, and infrastructure. The recommended writing tools, such as Grammarly and Turnitin, as well as other editing tools, supported the students' writing process. Notably, the university library services allowed students to check the originality and similarity percentage of their writing (Figure 9). Besides, the teacher provided a list of recommended readings or resources to support the students' independent reading sessions. To this extent, students can revisit at any time to read supported references during the learning process, particularly during their writing process.

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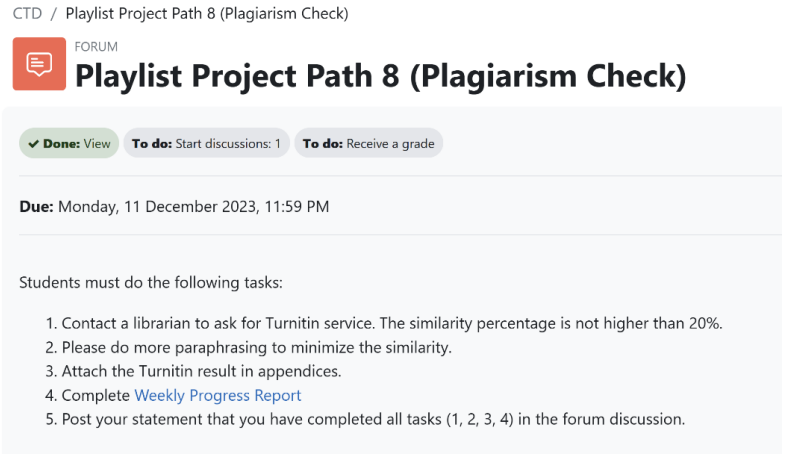


Figure 9. *System support*

Assessment

The assessment in this study includes self-assessment, peer assessment, and teacher assessment, which use the same assessment criteria. The assessment rubric criteria include the research topic and assignment parameters, summary, critique, educational implication, and writing mechanics.

Most students agreed that the assessment features in personalized learning can reflect on their learning process and identify their strengths, weaknesses, and areas for improvement (S3). The students consistently expressed this finding. Some productive feedback gives them insights to develop their skills (S2).

> The assessment features can reflect on our learning process and identify our strengths, weaknesses, and areas for improvement. From the teacher's feedback, we can learn and reflect on our work. (S3)

> Self- and peer assessments are beneficial, as we can learn from others' evaluations of assignment parameters, writing mechanics, and other aspects, and gain valuable insights to improve our skills. (S2)

Self-reflection

In this study, self-reflection was conducted through three activities, including after completing the self-assessment, in the weekly progress report, and in the personalized learning vision to action project planners. To begin with, the students do self-reflection after completing their self-assessment of their playlist project (writing a critical review). To this extent, the rubric is integrated into the self-assessment, specifically placed in the last part of the rubric. The self-reflection addresses four aspects: three critical writing areas to improve in the next formal writing playlist, the challenges of completing this project, features that facilitate your writing development and lessons learned from the entire process. The second self-reflection was conducted during their weekly reflections, following completion of their tasks. This reflection is integrated with the weekly progress report (Figure 3). The last self-reflection was integrated with students' personalized learning vision to inform action project planners (See Figure 2), addressing their mindset (relevance, growth mindset, self-efficacy, and sense of belonging).

As observed in the LMS (Figure 10), students were required to engage in self-reflection through the Playlist Project Path 10. As revealed in the FGD, students found that self-reflection facilitates their learning. Students found it helpful to recall areas for improvement by identifying their weaknesses. In particular, S4 noted that self-reflection is beneficial because it enables him to identify which aspects of his weaknesses are present in the project. It helps him be aware of my shortcomings and the study process. S3 thought that self-reflection could change his learning and develop his understanding, critical thinking, and self-awareness. It encourages the individual to be active in the learning process. It can create a student's academic and personal development. As the self-assessment is also integrated with the weekly progress reports, students found that it plays an essential role as a reminder to complete tasks and motivates them to complete tasks before deadlines.

> It can change my learning and develop my understanding, critical thinking, and self-awareness. It encourages the individual to be active in the learning process. It can develop my academic and personal development. (S3)

> Self-reflection is beneficial because it enables me to identify and address the weaknesses in my

project. It helps me to be aware of my weaknesses and the study process. (S4)

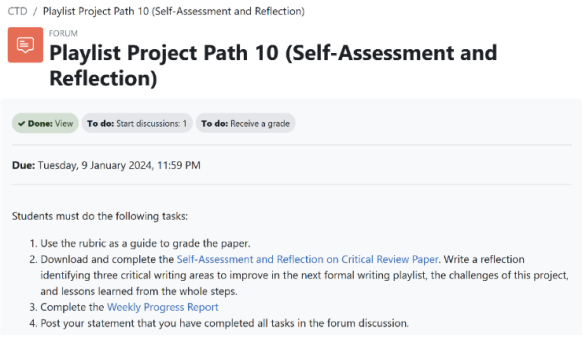


Figure 10. *Self-assessment and reflection*

From students' PLVAPP (See Figure 2), a room for self-reflection is also dedicated to addressing their mindset (relevance, growth mindset, self-efficacy, and sense of belonging). The students recognized the development of their mindset during and after working on the playlist project, as seen in a sample in Figure 11. This finding aligns with the result of the FGD, as expressed by S3, stating that self-reflection contributes to his academic and personal development.

MY MINDSET	
Relevance *Why do I care? Why does the work matter? Is this the only way?*	• The usage of media ICT Kahoot in the English subject may create innovative learning that increases students' motivation, which enhances their learning results. • The topic research I review matters since it is relevant for online learning progress. As the research context focuses on the pandemic, where online learning is established, innovative learning through media ICT Kahoot may help students progress in their learning process. • There are a lot of other methods that may help students further. In this case, the topic research focuses on the usage of Medica ICT Kahoot as one of the applicable tools that may help students progress in learning.
Growth Mindset *What criteria am I holding myself to? How am I doing right now? How do I feel right now?*	• The criteria I am holding is whether using Media ICT Kahoot may help enhance students' learning process. • Throughout the research and from the data I have gathered, the effectiveness of media ICT Kahoot may help students' learning process. • I feel that this topic research that I'm researching helps me to understand and learn more about the topic.
Self-Efficacy *Where am I in my process? What are my next steps?*	• In the process, I gather relevant journal articles and create a draft for my topic research, which I then finalize. • The next step is to maintain my learning pace and imbue what I have learned for future research and learning processes.
Sense of Belonging *How does this impact my connection with others?*	• The research topic that I'm researching helps me connect with my peers/classmates. We discussed each other's topic research and gave feedback to improve our research.

Figure 11. *A sample of self-reflection in a student's personalized learning vision to action project planner*

In this study, self-reflection was conducted through three activities, including after completing the self-assessment, in the weekly progress report, and in the personalized learning vision to action project planners. To begin with, the students do self-reflection after completing their self-assessment of their playlist project (writing a critical review). To this extent, the rubric is integrated into the self-assessment, specifically placed in the last part of the rubric. The self-reflection addresses four aspects: three critical writing areas to improve in the next formal writing playlist, the challenges of completing this project, features that facilitate writing development, and lessons learned from the entire process.

Voice and choice (flexibility)

The observation reveals some findings that the students have a voice and choice during the learning process. To illustrate, students have room to design their learning and co-create their learning plan or pathway through the PLVAPP at the beginning of the Playlist project (writing a critical review). To begin the writing project, students can choose a specific topic. Then, they express their thoughts and opinions when writing a critical review. Regarding their learning pace, students complete the Playlist phases on a weekly basis and can freely return to any previous phase at any time. More importantly, students have the flexibility to manage their learning pace (at a slower or faster rate). The most important thing is that they complete all tasks before the final submission. To gather feedback from their peers and teachers, students can schedule individual conferences as part of their internship program (See Figure 12) and select their peer reviewers.

INDIVIDUAL CONFERENCE

No	Time	Tuesday, 14 November 2023	Thursday, 7 Dec 2023	Thursday, 4 Jan 2024	9 Jan 2024
			Name		
1	17.00 – 17.15				
2	17.15 – 17.30		Student 4 👍		
3	17.30 – 17.45				
4	17.45 – 18.00	Student 4 👍			
5	18.00 – 18.15				Student 4 👍
6	18.15 – 18.30				
7	18.30 – 18.45			Student 1 👍	
8	18.45 – 19.00	Student 3 👍			Student 2 👍
9	19.00 – 19.15		Student 3 👍	Student 3 👍	
10	19:15 – 19.30		Student 5	Student 5 👍	Student 9 👍
11	19:30 – 19.45				Student 6 👍
12	19:45 – 20.00	Student 5 👍			
13	20:00 – 20.15	Student 8 👍			
14	20:15 – 20.30	Student 6 👍			

Figure 12. *Time slots of the individual conference*

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Meanwhile, the FGD results reveal different perspectives on how flexibility in personalized learning facilitates their learning. Students (i.e., S4) found that the flexibility in personalized learning allows them to access the material and participate in class activities at their convenience, as they have other commitments (such as internships or part-time jobs). They attempted to adhere to the schedule and complete the assignment on a weekly basis. S1 and S2 felt that they could explore the project further and more deeply. Thus, they made their best effort to complete the project.

> The flexibility in the class is helpful since we also had internships before. We can complete the assignments at any time and from anywhere. For in-person or Zoom meetings, we can arrange it to meet everybody's schedule, which is really helpful for our learning. (S4)

Similar to classroom observation findings, personalized learning flexibility allows students to express their opinions directly (S1).

> Flexibility in personalized learning allows the students to express their opinions directly, and we can discuss or explore them further to improve learning. (S1)

The essential point drawn from the data regarding the first personalized learning feature, goal setting, or learning tracking, is that it facilitates students in various ways throughout the entire playlist project paths. To begin with, goal-setting or learning-tracking features help students brainstorm ideas at the start of the playlist project for writing a critical review of a research article. As observed from the online individual conference, students drafted their writing project plan through the PLVAPP with the teacher's guidance. In particular, the teacher helps students to design problems or challenges, processes, pathways, and mindsets. Some clarifications are also provided to elaborate on terms they needed help understanding, phases they had to complete, and assignment requirements they should fulfill. This finding aligns with Bray and McClaskey (2013) and Grant and Basye (2014), stating that students identify and meet goals and benchmarks along their learning path with the teacher's guidance and recommendations.

Goal setting or learning tracking in personalized learning also encourages students to plan their schedules more effectively, regularly, and in a structured manner. Also, it enhances students' creativity in planning their learning paths, as they can explore their preferences and interests and achieve the desired learning outcomes. This way, students are responsible for setting their learning goals and achieving mastery (Bray & McClaskey, 2013; Grant & Basye, 2016; Kallick & Zmuda, 2017). In personalized learning, this crucial point drives learning in dynamic phases as students can move from pillar to post at any time, depending on their pace. Importantly, they succeed with their learning goals.

Moreover, goal setting and learning tracking monitor students' learning progress by recording their tasks, reflections, and self-assessments for each week, thereby supporting time management. In personalized learning, students are eager to customize their learning experience to fit their individual circumstances, needs, and career aspirations. Therefore, they must continually refine their learning journey by considering their desired paths at different stages (Keppell, 2014). To successfully implement personalized learning, teachers must ensure students control the learning paths to achieve established goals and build self-efficacy, critical thinking, and creativity (Grant & Basye, 2014).

Interestingly, this study also uncovered some challenges associated with goal setting and learning tracking, including the need for digital literacy, prioritization, and motivation. As an illustration, some features of the LMS were so complicated that the students got lost using the provided links. This issue arises because students are not familiar with the LMS features. Thus, the role of teachers in supporting students is badly needed to encourage them to engage in self-exploration and become more familiar with the features. Besides, a lack of priority causes other challenges, as students need clarification about which goal should be completed and updated, since they are unfamiliar with it. The worst thing is that some students inconsistently completed the tasks on time due to their lack of motivation. Thus, teachers must be engaged in all aspects of student learning to minimize the possible challenges that may arise from the implementation of personalized learning. Integrating synchronous and asynchronous learning, both in-person and online, should be considered to maintain student engagement in the learning process. However, coping with these challenges may be time-consuming for teachers, as it requires comprehensive preparation and ongoing monitoring.

Moving on to the second feature of personalized learning, learning instructions or phases, the findings suggest that this feature facilitates students' learning in their early stages, as students have room to read and watch the recommended readings and videos, as well as project descriptions, rubrics, and drafting templates for writing a critical review. In particular, the senior students in this study are required to write a critical review for a research journal, which immerses them in authentic contexts. This activity and task encourage students to make learning meaningful (Heritage et al., 2015).

Moreover, step-by-step learning phases or instructions in personalized learning also provide good organization of instructions, which helps students manage their time and instills their confidence. This way, the students develop their personality traits, as Yuyun et al. (2024) revealed. The teacher's provision of various step-by-step instructions makes it easy for students to follow the learning phases or instructions from start to finish. Consequently, they drive learning by connecting to interests, talents, aspirations, and passions, thereby becoming more engaged (Yuyun et al., 2024) and independent (Bray, 2018).

Learning phases or instruction in personalized learning helped students develop their critical thinking and self-adjustment skills. They found new experiences in the learning atmosphere that differed from their previous classes. This necessitated a more critical approach to any learning steps provided in the LMS and a resilient adaptation to the learning process. These skills are promoted in students' learning, as revealed in a preliminary study by Yuyun et al. (2024), and enhanced to facilitate making meaning and managing learning (Heritage et al., 2015). The learning phases or instructions are organized to lead to deep learning and engage students' interests. This significant point suggests that learners drive their learning by connecting to their interests, talents, aspirations, and passions (Bray & McClaskey, 2013), thereby becoming more engaged and independent.

Regarding the third feature of personalized learning, the learning support encompasses collaboration among teachers, students, tools, resources, systems, and infrastructure. These learning supports or collaborations prominently exist in this study, which corroborates previous studies, such as Samah et al. (2011), Zmuda et al. (2015), Svenningsen et al. (2018), Grant and Basye (2016), Phobun and Vicheanpanya (2010), and Chatti and Muslim (2019). Learners build a network of teachers, peers, mentors, and advisors to support learning (Bray & McClaskey, 2013).

Teacher-student collaboration has been observed since the beginning of learning, both through online synchronous and asynchronous modes, as shown in Figure 9. This collaboration facilitates students to brainstorm their writing ideas, provide feedback on the writing process, and discuss any problems or challenges they face during the writing process. This collaboration confirms that the teacher guides the student's journey (Bray & McClaskey, 2016) through a step-by-step learning process, utilizing various communication channels within the learning environment (Chou et al., 2010). Interestingly, it is worth noting that this study portrays students' appreciation of the teacher's availability to facilitate individual conferences and provide feedback.

Regarding the collaboration between students, peer collaboration allowed students to receive feedback on their understanding and work, share thoughts and opinions, and motivate them to complete the task. Inevitably, these findings demonstrate that learning support in personalized learning stems from peers (Zmuda et al., 2015). Like teacher-student collaboration, students build a network of peers to support their learning (Bray, 2018) by utilizing various communication channels provided within the learning environment (Chou et al., 2010). Collaboration in group work is critical to many learning activities (Grant & Basye, 2014).

The following collaboration is between the student and the content (resources). As observed in the LMS, the teacher provided a list of recommended readings or resources to support the students' independent reading sessions. To this extent, students can revisit at any time to read supported references during the learning process, particularly during their writing process. This study found that interactive functions for learner-content interaction are linked to related learning materials, multimedia presentations, push media, online quizzes for self-evaluation, online help with content, individualized learning records, individualized instruction, and materials-viewed tracking. These findings align with some of the indicators identified by Chou et al. (2010).

Turning to the collaboration between students and the tools, particularly the recommended writing tools this study focused on, students employ various writing tools, such as Grammarly and Turnitin, as well as other editing tools, to support their writing process. Allowing students to

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interact more with the material and resources and acquire the skills to select and use tools and resources facilitates their learning enhancement with guidance from the teacher (Bray, 2018). It provides a unique learning experience for students (Svenningsen et al., 2018) by leveraging digital tools in personalized learning experiences. This current study makes a significant contribution to the existing literature, building on the work of Grant and Basye (2016).

Moreover, the infrastructure also supports students' learning. To illustrate, the study reveals that the university library services allowed students to check the originality and similarity percentage of their writing. It suggests that the university's infrastructure assists students in achieving their learning goals, confirming the previous studies conducted by Chatti and Muslim (2019) and Peng et al. (2019). Unlike Phobun and Vicheanpanya (2010), this study does not employ intelligent tutoring systems (ITS) for monitoring; instead, it focuses on utilizing the LMS's learning analytics to track students' progress and participation in personalized learning. Thus, it implies a potential challenge in implementing this personalized learning model in rural universities with limited resources.

As Grant and Basye (2014) stated, the established criteria described in rubrics enable students to experience formative assessments through teacher, self-assessments, and peer assessments, as well as summative assessments of products and processes. Particularly in personalized learning, an assessment rubric is essential in guiding students in targeting their learning goals, as they explore more and navigate their learning path independently.

The assessment, the fourth feature of personalized learning, consistently facilitates EFL students' reflection on their learning process and identification of their strengths, weaknesses, and areas for improvement through productive feedback from teachers and peers. Importantly, these feedback loops enable students to develop their skills (Bray & McClaskey, 2013). Learning communities among students, peers, and teachers in personalized learning environments offer students ample opportunities to practice, explore, and refine their writing skills. They learned from their failures or mistakes to sharpen their strengths and produce their best writing artifact. Involving students and gathering forward-looking feedback in the assessment process demonstrates personalized learning strategies, particularly those that are learning-oriented.

In addition, the feedback loop among self, peers, and teacher assessments in this study enables students to experience their learning path, as they can monitor their progress toward achieving the course expectations or learning outcomes. This finding aligns with previous studies conducted by Wiggins & McTighe (2005) and Zmuda et al. (2015), which claim that regular feedback loops inform students of the effectiveness of their efforts in relation to the goal they are attempting to achieve.

Moreover, in personalized learning, students seek and use teacher and peer feedback to support their self-assessment. Productive input from the teacher and peers enables students to become self-directed learners with agency (Bray & McClaskey, 2013). Similar voices were revealed in the previous paragraphs, and the feedback loop among self, peers, and teacher assessments in this study provided room for developing their agency in personalized learning. To this extent, students develop a sense of ownership (Larsen-Freeman et al., 2021) through engaging in intentional and meaningful actions, learning, and seeking and internalizing new knowledge (Zeiser et al., 2018). Exploring student agency in personalized learning also enables them to cultivate a growth mindset (Larsen-Freeman et al., 2021) and can have a significant impact on academic achievement.

Regarding the fifth feature of personalized learning, self-reflection, this study reveals prominent findings regarding how self-reflection in personalized learning facilitates students' learning to some extent. Students acknowledge that self-reflection helps them identify areas for improvement by revealing their weaknesses and strengths. These findings demonstrate that students are better positioned to take academic risks, learn from their experiences, and tackle the next task more intentionally (Dougherty & Camp, 2021).

Moreover, this study also found that students can change their learning and develop their understanding, critical thinking, and self-awareness through self-reflection. Thus, it encourages individuals to learn and develop their academic and personal skills actively. These essential findings confirm that students can build self-awareness competencies through reflection, from identifying strengths to developing clear goals for specific tasks (Dougherty & Camp, 2021). Importantly, their personal development, including relevance, growth mindset, self-efficacy, and sense of belonging, is essential in personalized learning, as students are at the center of learning and drive their learning paths. In other words,

personalized learning highly promotes student agency, enabling students to reach their highest potential and master content (Grant & Basye, 2014; Kallick & Zmuda, 2017; Patrick et al., 2013; Rickabaugh, 2016).

Another interesting finding in this study is that weekly self-reflection reminds and motivates the students to complete the tasks before deadlines. In personalized learning, as classified by Samah et al. (2011), the interactivity dimension of the learner-self interaction plays a crucial role, as student agency is highly promoted. To this extent, students monitor their activities in the learning environment and track their completed tasks for reflection (Chou et al., 2010). This self-reflection feature complements the other learning tracking features typically facilitated by the LMS, such as calendar and schedule reminders, task lists, material-viewed tracking, learning completion tracking, grade status tracking, and learning dashboards.

The final feature of personalized learning in this study is flexibility: voice and choice. In this study, voice and choice focus on allowing students to be more flexible in their learning paths, particularly by learning at their own pace, a strength and advantage that personalized learning provides. As revealed by this study, flexibility in personalized learning is crucial for accommodating students' diverse preferences. Regarding voices, students express their opinions through various means. During the writing playlist, students have room to design their learning and co-create their learning plan or pathway through the PLVAPP at the beginning of the Playlist project (writing a critical review). To begin the writing project, students can choose a topic that aligns with their interests. Then, they express their thoughts and opinions when writing a critical review. These findings corroborate Green and Harrington's claim (2020) that giving students a voice may encourage them to share their ideas or understanding, design their project or unit, set goals and monitor their learning, and lead a conference, discussion, or presentation.

Meanwhile, students' choices are reflected in their learning pace; students complete the Playlist phases on a weekly basis and can freely return to previous phases at any time. More importantly, students have the flexibility to manage their learning pace (at a slower or faster rate). The most important thing is that they complete all tasks before the final submission. To receive feedback from their peers and teachers, students can schedule individual conferences via Zoom, as they have an internship program, and select their peer reviewers. Leveraging digital technologies for synchronous online individual conferences is a prominent practice in well-designed technology systems that enable personalized learning by monitoring individual progress, suggesting personalized learning paths, and allowing students to progress at their own pace (Sturgis & Patrick, 2010; Lee et al., 2018). This study clearly demonstrates that allowing students to learn at their own pace is a key strength and advantage that personalized learning offers.

Other students' choices in personalized learning are presented through the flexibility to access the material and participate in class activities at their convenience, as they have other commitments (such as internships or part-time jobs). They attempted to adhere to the schedule, completing the assignment on a weekly basis and delving deeper into the project. This essential point highlights that student choice empowers students to determine what they want to learn, allowing for freedom and autonomy in the classroom. It gives students the autonomy to determine the route they want to learn new skills (Green & Harrington, 2020). Additionally, students' voices and choices in personalized learning also promote seamless learning, which bridges learning across various settings, technologies, and activities (Sharples et al., 2016). This flexibility fosters dynamic communities that enable learning to extend beyond the traditional brick-and-mortar classroom (Grant & Basye, 2015; Patrick et al., 2013).

Regarding the implementation of fundamental learning principles, as promoted by Heritage et al. (2015), this study shows that students can make meaning, participate, contribute, and manage their learning through all personalized learning features. Goal setting and learning tracking facilitate students in implementing all learning principles (making meaning, participating, contributing, and managing) by completing PLVAPP and participating in individual conferences. Creating goals and tracking learning also demonstrates how students manage their learning by taking personal responsibility. Students take time to think, tackle real and interesting problems, and devise solutions when completing the PLVAPP. Meanwhile, other personalized learning features, such as learning instructions, learning support, assessment, self-reflection, and flexibility, facilitate students' participation and contribution to their learning. To illustrate, the learning instructions encourage students to ask questions, contribute ideas, and offer suggestions. The students have room to question during individual conferences, contribute to learning progress and assessments, and provide

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recommendations to improve their peers' writing drafts. Through learning support or collaboration, students engage with others (teachers, peers, resources, tools, infrastructure) in learning to communicate their ideas, perspectives, and understanding. The assessment feature encourages students to question, contribute, suggest, and learn from both mistakes and successes through self-assessment, peer assessment, and teacher feedback. Additionally, self-reflection fosters students' critical, creative, and metacognitive thinking throughout the writing process.

CONCLUSION

This paper has effectively elucidated the characteristics of personalized learning features and their functions in enhancing EFL student learning, particularly in EFL writing in Indonesia. The paper has thoroughly elucidated the implementation of personalized learning features and provided recommendations regarding its implications in the conclusion. In conclusion, personalized learning features have been evident in EFL classrooms, revealing their role in facilitating the writing endeavors of EFL senior students, such as writing critical reviews. They planned, drafted, revised, edited, and published their works using the Writing Playlist Project and ICT integration. In this conjunction, the synergy between personalized learning features, the writing process approach, and the writing playlist facilitates students in making meaning, participating, contributing, and managing learning. At the same time, they developed a better sense of agency, ownership, collaboration, critical thinking, creative thinking, metacognitive thinking, relevance, growth mindset, and self-efficacy. The data analysis findings have revealed the implementation of personalized learning features in the LMS-based writing project and its benefits in facilitating the learning of EFL students. Based on the findings, further steps are recommended, including conducting similar studies in different EFL classrooms, testing their applicability in various contexts, and developing personalized learning instructions to better portray the effectiveness of the features in facilitating student learning. Additionally, the monitoring system is crucial in ensuring that students achieve the desired learning outcomes and have equal accessibility to technology. This approach suggests leveraging effective tools to monitor students' learning paths, progress, and access; therefore, universities should invest in LMS and edtech training for faculty members. Ultimately, a need for broader studies across institutions is recommended for future studies.

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