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Digital Literacy Meets English Pedagogy: An Ethnographic Inquiry into Engagement Practices among Indonesian High School EFL Students

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ABSTRACT

This study examines the engagement practices of Indonesian high school students in digitally mediated EFL classrooms. Drawing on an ethnographic research design, the study examines how digital literacy-based instruction influences student engagement across behavioural, emotional, and cognitive domains. Conducted over one semester at a high school in Ternate, Indonesia, the research involved ten students and five EFL teachers, who were selected through purposive sampling. Data were collected via participant observation, interviews, document analysis, and field notes, and analysed using Spradley's ethnographic framework. Findings reveal that students exhibited high levels of behavioural engagement through adherence to classroom norms, timely participation, and collaborative digital tasks. Emotional engagement was fostered through culturally relevant digital content, including music, YouTube, and gamified platforms. In contrast, cognitive engagement emerged through the use of autonomous learning strategies, including the application of AI tools and flexible problem-solving approaches. Three cultural themes—digital discipline, emotional connectedness, and learner agency—underscore how digital literacy is socially and contextually constructed. The study concludes that student engagement in digital EFL classrooms is not solely dependent on access to technology, but is shaped by cultural practices, emotional relevance, and adaptive learning behaviours. These findings offer critical implications for digital pedagogy, teacher development, and equitable educational policy.

Keywords: Digital Literacy; English Pedagogy; Ethnographic Inquiry; Engagement; Indonesian High School

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1. Introduction

The intersection of digital literacy and English as a Foreign Language (EFL) pedagogy presents both opportunities and challenges. On the one hand, digital technologies offer unprecedented access to authentic materials, multimodal communication, and interactive platforms that support meaningful language use[1–3]. Further, the effective integration of these tools requires more than just technological access; it demands pedagogical reorientation and the cultivation of student engagement within a digital culture[3,4]. Engagement in this sense is multidimensional, encompassing behavioural, emotional, cognitive, and social dimensions that collectively influence learning outcomes[5,6]. In Indonesian high school classrooms—especially in under-researched or non-urban settings—understanding how students engage in digital literacy-based EFL instruction remains a critical and underexplored area of inquiry. While research on digital literacy and language education has expanded globally, much of the existing literature focuses on technologically advanced or Western contexts where infrastructural and pedagogical conditions are more conducive to digital integration[7–9]. Studies in Asian contexts, particularly Southeast Asia, often highlight infrastructural limitations, digital divides, and policy-practice mismatches[10–12]. In Indonesia, where English is taught as a foreign language and educational resources are unevenly distributed, the implementation of digital literacy in EFL pedagogy varies widely. Previous studies have investigated the digital readiness of teachers[13], students' attitudes toward technology[14], and the impact of ICT-based instruction on language learning outcomes[15]. However, few have critically examined how students engage with digital literacy practices within the lived realities of EFL classrooms. Even fewer have employed ethnographic approaches to uncover the nuanced, culturally situated experiences of students as they engage with digital tools and content.

This lack of ethnographic inquiry into the engagement practices of EFL students in digitally mediated classrooms constitutes a significant gap in the literature. Engagement is often measured quantitatively through surveys or achievement scores. However, these metrics may overlook the sociocultural dimensions of participation, identity formation, and interactional patterns that shape digital learning experiences[16–18]. Moreover, the concept of engagement itself is contextually constructed; what constitutes "active" or "meaningful" participation in one setting may differ markedly in another, especially across cultural and educational contexts[19,20]. Ethnography offers a methodological lens to capture these complexities by foregrounding the voices, behaviours, and situated practices of learners as they navigate digital literacy in their language learning journeys.

Furthermore, the role of digital literacy in shaping English pedagogy in Indonesia is still in flux[21,22]. Curriculum reforms have encouraged the incorporation of technology, yet the translation of policy into practice remains uneven[23,24]. Teachers and students often adapt digital tools in ways that reflect local constraints, cultural norms, and personal agency[25,26]. Understanding engagement in such settings requires attention to how digital resources are appropriated, resisted, or reconfigured within classroom routines and peer interactions. It also necessitates a closer look at the interplay between digital literacies and the linguistic, affective, and cognitive dimensions of language learning.

A critical moment of educational transformation, seeking to explore the confluence of digital literacy and English language pedagogy through the lens of student engagement. This study addresses the aforementioned gaps by conducting an ethnographic inquiry into the engagement practices of Indonesian high school students in digitally mediated EFL classrooms. By focusing on students' lived experiences, interactions, and participation in technology-integrated English lessons, this research aims to explore how literacy is enacted, negotiated, and experienced through students' engagements in English classrooms. In doing so, it contributes to the broader conversation on digital literacies in language education while offering localised insights that can inform pedagogical design, teacher development, and policy interventions in Indonesia and similar contexts.

2. Materials and Methods

The present study adopts a qualitative approach with an ethnographic research design to explore digital literacy-based instruction in Indonesian EFL classrooms. Ethnographic research aims to describe, analyse, and interpret the cultural patterns of behaviour, language, and interaction within a specific community over time[27]. It allows researchers to understand individuals' lived experiences within their natural environments, emphasising their beliefs, practices, and

social meanings. In particular, this classroom ethnography examines the sociocultural aspects of teaching and learning in educational settings, aiming to provide a comprehensive and contextualised understanding of digital literacy integration in EFL instruction. The study was conducted over six months (one semester), aligning with the academic calendar at SMA Negeri 10 Kota Ternate, North Maluku. This school was purposefully selected due to its strong digital infrastructure, accredited quality, and commitment to educational innovation, including the implementation of the 2013 and Merdeka curricula.

The participants were selected using purposive sampling techniques[28], involving five EFL teachers and ten EFL students based on specific criteria such as cultural background, teaching and learning experience, digital literacy engagement, academic achievement, and accessibility to digital tools. The research instruments comprised the researcher as the main instrument, semi-structured interview protocols, voice recorders, observation sheets, video recorders, document analysis, and field notes[29,30].

Data collection methods included interviews, participant observation, document analysis, and field notes, which together enabled an in-depth exploration of digital literacy practices. Interviews were conducted using ethnographic question types—descriptive, structural, and contrastive—to uncover participants' perspectives[31]. Interviews were performed with five educators and ten students, utilising an interview guide. The interview sessions were documented with a voice recorder. During the observation process, the researcher participated as an observer in all school activities and classroom learning processes, capturing all events that transpired during the observations. Concurrent analysis of papers focused on educators' instructional resources and other pertinent school materials.

The data were obtained through interviews, observations, document analysis, and field notes, and analysed using Spradley's model, which consists of four stages: domain analysis, taxonomic analysis, componential analysis, and cultural theme identification. This analytical framework allowed the researcher to classify, compare, and interpret patterns of digital literacy implementation among the participants. Ultimately, this ethnographic inquiry aims to provide culturally grounded insights into how digital literacy shapes teaching and learning in EFL classrooms, highlighting the en-

gagement of both teachers and students within their authentic educational contexts[32,33]. Spradley's four-stage model of data analysis illustrates that domain analysis involves the researcher acquiring a general and comprehensive picture of objects or social situations. Taxonomy analysis: The researcher selected domains that are more detailed for internal patterns. Component Analysis: Identify distinct attributes of each internal pattern by comparing the elements. Culture Theme: Searching for connections between domains and how they relate to the whole, and themes that match the research's focus and sub-focus. The four-stage model of data analysis is illustrated by **Figure 1**:
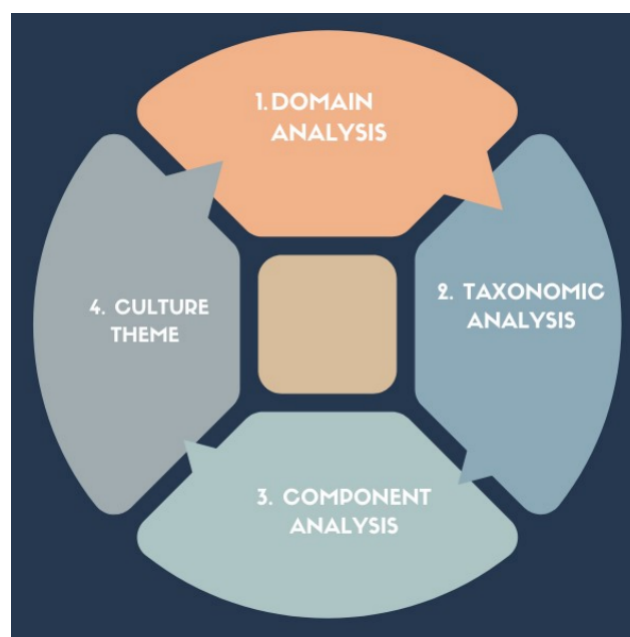
Figure 1. Spradley's Model of Data Analysis.

3. Results

This section presents the research findings concerning student engagement in digital literacy-based instruction within EFL classrooms. Student engagement is examined through three dimensions: behavioural, emotional, and cognitive engagement.

3.1. Behavioral Engagement

The following evidence illustrates the findings on students' behavioural engagement in digital literacy-based instruction in EFL classrooms. The indicators of behavioural engagement include following rules, adhering to class norms,

maintaining school attendance, demonstrating effort, Perseverance, concentration, and attention, as well as asking questions, participating in class discussions, and actively engaging in learning activities.

3.1.1. Following Rules and Adhering to Class Norms

The findings illustrated students' behavioural engagement as they participate in digital literacy-based activities in EFL classrooms. Students are firmly committed to the collaboratively established regulations, particularly regarding the use of digital devices during instruction. Devices were employed effectively as educational instruments rather than for recreational use. Furthermore, students typically came punctually, while some delays were attributed to external circumstances, including travel distance and Friday prayer commitments. This conduct demonstrates a shared recognition of the significance of order and accountability as essential elements of the learning process. Classroom rules were jointly developed and upheld, demonstrating the teacher's effectiveness in fostering a disciplined classroom culture.

Students' adherence to regulations was evident through their active participation during the teachers' instructions, indicating a clear understanding of their duties and responsibilities in digital learning. The existence of standards, such as limiting device usage to educational purposes, demonstrates the incorporation of values associated with discipline and self-regulation. This discipline is essential for good learning, especially in digital settings where distractions are prevalent. Teachers and students together cultivated a supportive environment that encouraged positive involvement. This demonstrates that behavioural engagement is influenced by individual motivation and the classroom's robust social and cultural framework. Hence, it can be inferred that classroom regulations and standards are essential to promoting students' effective participation in digital literacy instruction.

Extract 1

In the classroom, prior to the start of lessons, agreements are typically made regarding the use of digital devices. In our class, we agreed that devices are to be used solely for educational purposes, not for playing games or engaging in other unrelated activities. During

the lesson, students are allowed to access information using their devices, not just from textbooks. They can search for a variety of information sources more quickly and easily." (Interview with teacher SRF, 2025)

Extract 2

"So far, in my class, there have indeed been some students who arrive late. However, they generally adhere to the rules that were agreed upon prior to the start of the lesson." (Interview with teacher IN, 2025)

Extract 3

"Students are usually late during the first class, especially early in the morning. The first class often presents a challenge." (Interview with teacher SN, 2025)

Extract 4

"Yes, we arrive on time. We have never been late for classroom lessons." (Interview with students ZHR & RSA, 2025)

Extract 5

"I usually arrive on time. However, there have been occasions when I was late because my house is quite far. Our English class is scheduled on Fridays, so sometimes I arrive late after Friday prayers." (Interview with student CTR, 2025)

Extract 6

"During the learning process, students follow the lesson in an orderly manner, and no students violate the rules during class. However, it was observed that some students occasionally arrive late." (Classroom Observation, 2025).

3.1.2. Effort

The majority of students showed sincere diligence in fulfilling the specified assignments. Several students showed inventiveness by choosing more interactive formats, such as PowerPoint presentations. Despite variances in the speed and preferences for job execution, students typically adhered to deadlines, especially when digital media were incorporated into the educational framework. Using digital platforms, such as instructional videos and educational applications,

has demonstrated efficacy in enhancing students' interest and motivation for task completion. This indicates that effectively crafted digital training can enhance students' intrinsic motivation.

Extract 7

"Certainly, some students are quick while others are slower. However, some students are resourceful. For example, when I assigned a task to create a summary, some students proposed presenting it in the form of a PowerPoint presentation, as they believed it would be more efficient." (Interview with teacher SRF, 2025)

Extract 8

Although some students prefer to complete their assignments later, the majority typically submit their work on time. However, some students are not particularly interested in the subject, and thus often fail to submit their assignments punctually." (Interview with teacher IN, 2025)

Extract 9

"When assignments are given through such platforms, students tend to be more engaged and are more likely to complete all the tasks. The amount of time I allocate for the assignments usually corresponds well with the time they need to complete them." (Interview with teacher FS, 2025)

Extract 10

"I usually start writing or working on the task right away. I believe that postponing assignments will cause them to pile up and become more burdensome later. If the teacher assigns a task through an app or video, I make sure to access it first before starting the task." (Interview with student PTR, 2025)

Extract 11

"If the assignment has a deadline of a few days, I usually look for educational videos at home to better understand the material. If the deadline is the same day, I ask the teacher directly." (Interview with student SRA, 2025)

Extract 12

"I follow the teacher's instructions. Since I enjoy learning English, I do not find it difficult to complete the assignments on time." (Interview with student IZZ, 2025)

Extract 13

"Students arrive in class on time, make an effort to answer the teacher's questions during the learning process, complete in-class assignments promptly, and present their work in front of the class, both in groups and individually." (Classroom Observation, 2025)

In addition, learners participated in collaborative endeavours to accomplish tasks by utilising smartphones to access resources such as Google and various AI technologies. This observation demonstrates students' learning endeavours in digital literacy learning inside the English language classroom.

Figure 2 depicts students' endeavours to fulfil the duties assigned by the teacher during the teaching process. The students engaged collaboratively, using smartphones to access educational resources from various digital media channels. Every student participating in the group project demonstrated significant engagement in completing the assigned task by proficiently utilising digital resources. This demonstrates a substantial degree of students' behavioural engagement, highlighting the critical importance of digital literacy-oriented learning in promoting active involvement during classroom instruction.
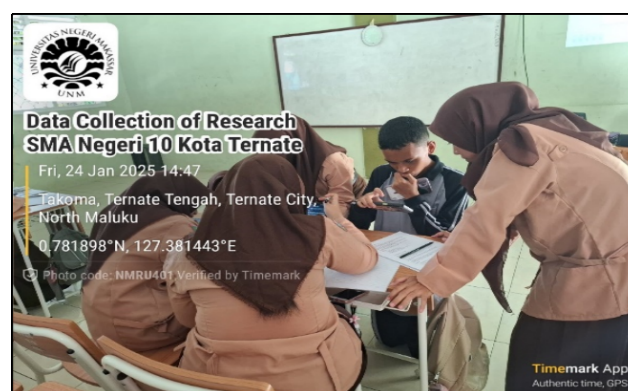
Figure 2. EFL students' effort.

3.1.3. Perseverance

Students persist in the face of learning challenges. They proactively pursue solutions by directly consulting the teacher, engaging in peer conversations, or independently

seeking supplementary knowledge, including the use of AI technologies and instructional films. This conduct indicates a robust commitment to endurance and a profound intellectual curiosity. Additionally, students exhibit critical thinking in their academic performance, as evidenced by their inquiries about the explanations for their grades. Collaborative learning practices, especially those that incorporate group work, foster the cultivation of tenacity as students assist each other in task completion. Moreover, students demonstrate unwavering attention when interacting with educational material and fulfilling homework assigned by the teacher, frequently employing digital media.

Extract 14

"When the results are unsatisfactory, they usually ask, 'Why is my grade low?'" They often inquire and want to know in more detail. I explain what is lacking so that they can make improvements." (Interview with teacher FS, 2025)

Extract 15

"First, I try to understand the question. If I already understand it, I answer. If not, I search for references on Google." (Interview with student ZHR, 2025)

Extract 16

"Usually, the teacher divides us into groups. We discuss and assign tasks, for example, someone looks for specific information while another is responsible for taking notes from the discussion." (Interview with student STI, 2025)

Extract 17

"It depends on the task. For essays, I first try to understand the material, then write with a clear structure. If there is a task I do not understand, I usually look for information using AI or watch explanatory videos." (Interview with student RCH, 2025)

Extract 18

"Students tend to ask the teacher and engage in discussions with their classmates when there is material or an assignment they do not fully understand." (Classroom Observation, 2025)

This documentation shows students' persistence in participating in digital literacy teaching inside the EFL classroom and fulfilling the prescribed tasks.

Figure 3 illustrates that the students exhibit a significant degree of endurance in fulfilling the diverse tasks provided by the teacher during the learning process. They employ tools like Kahoot for quiz-based assignments and consistently consult with the teacher to ensure the activities are completed correctly and within the specified timeline. This indicates a significant level of behavioural involvement in the learning activities, suggesting that the students are deeply committed and resilient.
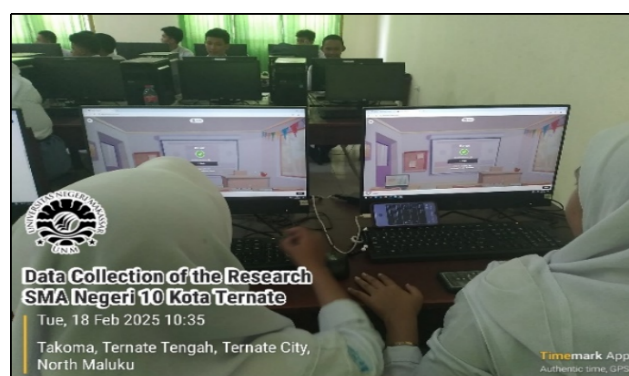
Figure 3. EFL students' Perseverance.

3.1.4. Concentration and Attention

Incorporating digital media into learning markedly enhanced students' concentration and attention. Accessing information via personal devices motivated students to participate more actively and enhanced their understanding of the educational materials. Teachers indicated that the classroom environment became more dynamic by implementing digital methods, suggesting that digital media can cater to various learning styles and improve students' behavioural engagement. This illustrates that a learning environment attuned to students' technical requirements can significantly enhance their concentration and motivation to study.

Extract 19

During the learning process, students can access information from their devices, not only from books. They can search for a variety of information sources more quickly and easily." "Indeed, when they are given the freedom to use their devices for information seeking, they become more active. They can obtain an-

swers rapidly, which makes the classroom atmosphere more lively and engaging." (Interview with Teacher SRF, 2025)

Extract 20

"Yes, they are very enthusiastic. They pay close attention and concentrate fully. Students tend to enjoy learning more when digital platforms are used." (Interview with teacher SN, 2025)

Extract 21

"They are very enthusiastic, Sir. They truly enjoy and actively engage in the learning process." (Interview with teacher FS, 2025)

The provision of digital literacy teaching enhanced students' focus and engagement with the material presented by the teacher. Students demonstrated enthusiasm for the learning activities and engaged actively in the classroom process. This record evidences students' concentration and attentiveness during classroom instruction.

Figure 4 illustrates that incorporating digital media or platforms into Education by teachers has a significant impact on students' focus and attention. This suggests that learning centred on digital literacy positively enhances students' concentration and attention in the classroom.

Figure 4. EFL students' concentration and attention.

3.1.5. Asking Questions and Class Discussions

The ability to pose inquiries and participate in discussions revealed a significant degree of students' cognitive and social involvement. In dynamic classrooms, students can articulate their viewpoints, inquire, and showcase their learning achievements. Organised collaborative learning, as demonstrated by group work, fosters significant student interactions. Incorporating digital media such as YouTube videos and interactive tools like Kahoot facilitates a more

dynamic question-and-answer process during learning. A minority of students exhibit lower engagement due to insufficient comprehension of the topic and varying learning styles, highlighting the necessity for diverse teaching strategies.

Extract 22

"Some students did not respond. One of the contributing factors might be that they did not fully understand the material being delivered." (Interview with teacher IN, 2025)

Extract 23

In active classes, students generally participate actively in discussions. They frequently ask questions because the instructional model I implement provides them with opportunities to present something." (Interview with teacher HR, 2025)

Extract 24

"Usually, the teacher divides us into groups. We engage in discussions and divide tasks among ourselves. For instance, some of us search for specific information while others are assigned to record the discussion outcomes." (Interview with Student STI, 2025).

Extract 25

In digital literacy-based learning activities, students and the teacher interact through question-and-answer sessions and discussions. Students often ask questions related to the material they study via YouTube videos and utilise Kahoot. Group discussions are regularly conducted during learning sessions, with students divided by the teacher according to the material." (Classroom Observation, 2025)

Utilising digital media in classroom activities motivates students to actively engage in the learning process, such as asking questions and participating in debates. The subsequent evidence demonstrates students' engagement in questioning and collaboration during educational activities.

Figure 5 depicts students participating in inquiry and dialogue to fulfil a task provided by the teachers during the learning session. The students use their smartphones to complete the assignment and actively participate in class discussions. This illustrates how learning grounded in dig-

ital literacy enhances student engagement by promoting active participation through inquiry and collaborative discourse in the classroom.

Figure 5. EFL students' questions and class discussions.

3.1.6. Participation in Activities

Student engagement was exceptionally elevated, mainly when online instruction included collaborative tasks. Students actively answered questions, provided recommendations, and participated in exams and group presentations. Digital media demonstrated efficacy in enhancing participation among students who had previously been less engaged. The teachers' deliberate use of visual and digital media significantly enhanced the involvement of almost all students. This discovery suggests that technology-enhanced learning has significant potential to foster equitable behavioural engagement among students.

Extract 26

"Yes, there were group discussions. The time I allocated was sufficient for some, but others exceeded the allotted time." (Interview with teacher IN, 2025)

Extract 27

"Student participation was excellent; they were consistently active, asked questions, and offered suggestions. From a behaviourist perspective, their engagement in the learning process was outstanding." (Interview with teacher SN, 2025)

Extract 28

"Students were more active in participating when I incorporated digital tools in my teaching. One student in particular, from my class, struggled to follow the lessons. I continuously sought ways to assist him, such as by using digital media like YouTube and animated images. This student, named JF, showed greater enthusiasm when I employed these types of media." (Interview with teacher FS, 2025)

Extract 29

"In active classes, students are typically engaged in discussions. They often ask questions because the learning model I implement provides them with opportunities to present their ideas." (Interview with teacher HR, 2025)

Extract 30

Student participation in class was highly active. For example, they responded to questions posed by the teacher after watching a YouTube video, worked on worksheets in groups using smartphones, and presented their results in front of the class. The same level of engagement was observed when students participated in quizzes using the Kahoot application." (Classroom Observation, 2025).

The subsequent data demonstrate the significant extent of student engagement in digitally facilitated learning activities.

Figure 6 demonstrates that student engagement in digital literacy-focused learning is markedly noteworthy. The student's engagement is apparent in group conversations facilitated by the teacher, during which they employ smartphones to complete tests. Subsequently, group representatives present their findings to the class based on the results of their talks. This illustrates the significant allure of digital media in promoting student engagement and active involvement in the educational process.

Figure 6. EFL Students' participation in activities.

3.2. Emotional Engagement

The following data illustrate students' emotional engagement in digital literacy-based instructional activities within the English language classroom. The indicators analysed include interest, enthusiasm, boredom, happiness, sadness, and anxiety.

3.2.1. Interest

Students demonstrated a pronounced interest in instruction centred on digital literacy within the EFL classroom. Participants expressed pleasure and heightened motivation when teachers used digital media, including YouTube videos, English music, digital quizzes, and storytelling activities, in the learning experience. Technology was regarded not just as a tool but as a medium that augmented participation and made classroom information more pertinent to students' daily experiences. Student engagement was enhanced when educational materials were presented interactively and when learners were given flexibility in completing assignments.

Digital presentations or video storytelling tasks were deemed more engaging and pleasurable than conventional instructional methods. Moreover, technology-enhanced learning enabled customisation, allowing students to tailor their educational experiences to their specific preferences, encompassing both visual and auditory modalities. This increased involvement indicates the potential of digital instruction to enhance student motivation, especially in English language acquisition. Teachers must utilise diverse instructional methodologies and varied content to maintain student engagement over time. Student enthusiasm is crucial for fostering a lasting connection and facilitating more engaging, interactive, and meaningful experiences.

Extract 31

"I feel excited and enthusiastic, especially when the lesson involves YouTube or English-language music. It makes me more motivated."
"If I do not understand something, I directly ask the teacher. If permitted, I will use Google or other sources to find the answer." (Interview with student PTR, 2025)

Extract 32

"I feel enthusiastic, particularly when animated videos are shown. It feels exciting and enjoyable." (Interview with student NRM, 2025)

Extract 33

"I feel happy because it is easier to complete the tasks." (Interview with student ZHR, 2025)

Extract 34

"When there are quizzes or games, I become more enthusiastic because I have a competitive spirit." (Interview with student RCH, 2025)

Extract 35

"We are often assigned to do presentations or storytelling. So, we become more active in such activities. I often choose digital formats because they are more practical. I can work on them anywhere." (Interview with student IZZ, 2025)

Extract 36

"I feel enthusiastic, especially when the materials presented are interesting or relevant to daily life." (Interview with student RSA, 2025)

Extract 37

"Digital assignments are more flexible; they can be edited if there are mistakes." (Interview with student STI, 2025)

Extract 38

"I often feel enthusiastic, particularly when digital technology is used in learning. This is because technology helps me understand the material more easily and suits my learning style." (Interview with student RFL, 2025)

Extract 39

"Students demonstrated high levels of enthusiasm and engagement in every digital literacy-based learning activity. Although a few students appeared passive, the majority were very active and fully participated in all classroom learning activities." (Classroom Observation, 2025)

3.2.2. Enthusiasm

Student enthusiasm was significantly elevated, particularly when visual and interactive teaching methods were employed. Using animated movies, online quizzes, and mobile applications helped foster enthusiasm and enhance student concentration during lessons. The researcher noted that the

classroom environment got more dynamic when students exhibited this passion. This condition signifies a favourable emotional involvement stimulated by educational activities that are pertinent and congruent with the requirements of the contemporary digital generation.

Numerous students articulated that the lessons were "fun and enjoyable" when the content was presented via platforms such as YouTube or incorporated with music-based media. Alongside enhancing motivation, such passion also facilitated heightened student engagement in class discussions and reactions to inquiries. Elevated enthusiasm facilitated active engagement, even when learning depended on personal gadgets like smartphones. This suggests that enthusiasm arose from both the content and the delivery methods, which adeptly utilised modern technologies. Maintaining this degree of student excitement is essential for fostering a dynamic and engaging learning environment.

Extract 40

"Students demonstrated a high level of enthusiasm during digital-based learning activities. This was particularly evident when the teacher utilised materials in the form of YouTube videos, Kahoot, and incorporated smartphones into the learning process." (Classroom Observation, 2025)

Extract 41

"I feel enthusiastic, especially when the materials presented are interesting or relevant to daily life." (Interview with student RSA, 2025)

Extract 42

"I feel excited, particularly when animated videos are played. It feels engaging and enjoyable." (Interview with student NRM, 2025)

Extract 43

"I feel enthusiastic... emotionally, I still feel enthusiastic." (Interview with student STI, 2025)

Extract 127

"I feel happy and excited, especially when the lesson involves YouTube or English songs." (Interview with student PTR, 2025)

Extract 44

"I often feel enthusiastic, especially when digital technology is used in the learning process. This is because technology helps me under-stand the material more easily and aligns with my learning style." (Interview with student RFF, 2025)

Extract 45

"I feel happy, but sometimes nervous... However, the use of digital platforms, such as videos or songs, helps improve my mood." (Interview with student SRH, 2025)

Extract 46

"They are more active. They can quickly find answers, making the classroom atmosphere more dynamic and lively." (Interview with teacher SRF, 2025).

Extract 47

"Their enthusiasm is very high. They immediately focus on watching the videos I provide." (Interview with teacher IN, 2025)

Extract 48

"They are highly enthusiastic. They pay close attention with full concentration." (Interview with teacher SN, 2025)

Extract 49

"They are very enthusiastic, Sir. They truly enjoy and engage in the learning activities." (Interview with teacher FS, 2025)

3.2.3. Boredom

While numerous students exhibited enthusiasm and interest, some encountered boredom, especially when the learning materials were dull or repetitive. Students expressed disengagement when activities had extensive textual material or lacked the integration of digital technology in the learning process. The lessons' scheduling, particularly during the third or fourth time, exacerbated weariness and disengagement. Boredom frequently emerged when the materials were irrelevant or overly familiar, such as fundamental terminology previously covered in earlier instructional phases. Boredom in the digital realm was similarly noted when material distribution was monotonous or restricted to video presentations devoid of interactive components.

Several students reported experiencing physical and mental fatigue, which resulted in reduced concentration and engagement in learning activities. Teachers recognised that not all students could maintain their focus for prolonged pe-

riods. Therefore, teachers must identify indicators of student disengagement and swiftly modify their teaching methods, such as integrating digital games, group discussions, or innovative assignments, to re-engage students. Addressing boredom is, therefore, a significant difficulty in maintaining students' emotional involvement in digital literacy instruction.

Extract 50

"Some students appeared passive and bored while completing assignments in class and also when engaging with materials presented through YouTube videos played by the teacher." (Classroom Observation, 2025)

Extract 51

"Sometimes I feel bored when presentation tasks contain too much text, so I have to take pictures, write notes, and then try to understand the material." (Interview with student RSA, 2025)

Extract 52

"I never feel bored, unless the lesson becomes too monotonous or does not involve the use of technology. In my view, teaching methods should be varied." (Interview with student NRM, 2025)

Extract 53

"I feel enthusiastic when learning speaking skills because it is something I rarely study. However, I tend to feel bored with topics like verbs or vocabulary that I have already learned before." (Interview with student CTR, 2025).

Extract 54

"Much of the material from elementary to high school is repeated, which makes the learning experience feel monotonous." (Interview with student RCH, 2025)

Extract 55

"Usually, English lessons are scheduled during the third or fourth time, which is when we begin to feel tired." (Interview with student SRA, 2025)

Extract 56

"There are challenges, as not all students in the classroom can follow the lessons smoothly." (Interview with Teacher HR, 2025)

Extract 57

"There are some students who are not interested, particularly those who do not like digital media." (Interview with teacher SN, 2025)

Extract 58

"Some students report feeling bored. When I asked them, they said the issue was not the material itself, but rather problems outside of school." (Interview with teacher IN, 2025).

3.2.4. Happiness

Students often experience delight in digital learning environments, which include accessibility, convenience, and enhanced self-assurance. They express satisfaction with the freedom to complete assignments remotely, the ability to independently assess materials, and the improved clarity of instructional content. Technology-enhanced, adaptable learning settings promote a favourable and supportive climate for students. Teachers often note that students exhibit increased activity, cheerfulness, and confidence when afforded opportunities to respond to inquiries or engage in interactive quizzes.

This sense of enjoyment is intricately connected to a non-threatening, inclusive classroom environment and the facilitation of digital technologies that enable learners to advance at their own pace. In other instances, students prefer digital assignments, highlighting their practicality and the convenience of making adjustments when errors occur. Positive emotional responses substantially enhance learning motivation and fortify the connection between students and the learning process. Thus, fostering a learning environment that encourages joy is essential for holistically improving students' emotional engagement.

Extract 59

"Most students appeared enthusiastic and actively engaged in the digital-based learning process. They also demonstrated eagerness in responding to the teacher's questions and participated actively in completing online quizzes." (Classroom Observation, 2025)

Extract 60

"I feel enthusiastic, especially when the mate-

rials presented are interesting or relevant to everyday life." (Interview with student RSA, 2025)

Extract 61

"I feel the same; I am usually enthusiastic and happy. I enjoy it more because it is easier to complete assignments when they are delivered through Google or YouTube." (Interview with student ZHR, 2025)

Extract 62

"I often feel enthusiastic, particularly when the lesson involves digital technology. This variation makes the classroom atmosphere more enjoyable." (Interview with student RFL, 2025)

Extract 63

"I feel excited, especially when animated videos are played. It feels engaging and enjoyable." (Interview with student NRM, 2025)

Extract 64

"I often prefer digital tasks because they are more practical. I can complete them anywhere, whether at home or while playing." (Interview with student IZZ, 2025)

Extract 65

"They feel more confident. This makes them happier and more enthusiastic about learning." (Interview with teacher SRF, 2025)

Extract 66

"They are more interested and tend to complete all the tasks." (Interview with teacher FS, 2025)

3.2.5. Sadness

Feelings of sadness in digital learning frequently arise from students' perceived inadequacy in comprehending instructional material, primarily due to insufficient English language proficiency or technological issues such as unstable internet connections. Students often indicate a decline in concentration or clarity when the material is presented solely in English without enough visual aids. Sure, students experience feelings of despair or anxiety when they struggle to understand schoolwork or lag behind their friends.

These emotional reactions can provide substantial obstacles to student involvement in class and, if not adequately addressed, may erode learners' self-confidence and interest in the subject matter. Students may exhibit adverse emotional responses, including fatigue and confusion, particularly during prolonged learning sessions without interactive pauses. As a result, teachers must provide enhanced support to students encountering challenges, whether through supplementary guidance, visual aids, or collaborative group activities that promote peer engagement. Confronting emotional difficulties in digital Education requires empathy and inclusive teaching methodologies to ensure that all students feel supported and can engage comfortably and successfully with the learning process.

3.2.6. Anxiety

Student anxiety in digital learning environments is apparent in their reactions to quizzes, presenting tasks, and technological difficulties, including delayed internet connectivity. Students often exhibit anxiety when directly interrogated by the teachers or when presented with bad grades. Teachers report that students display anxiety when they perceive themselves as unable to answer questions or when teaching material is presented too swiftly. However, some types of anxiety can be alleviated by employing more student-friendly media, such as films or interactive games, which foster a more comfortable learning environment. Several students reported increased confidence when utilising digital technologies with which they were previously familiar. Nonetheless, performance pressure and the apprehension of academic failure persist as prevalent drivers of worry. Thus, teachers must cultivate a secure and nurturing educational atmosphere, deliver constructive criticism, and establish an environment where students can inquire or participate in conversations without apprehension of judgment. Emotional anxiety is a crucial element that must be addressed in technology-enhanced learning to guarantee optimal student engagement.

Extract 67

"Sometimes I feel bored when presentation assignments contain too much text, so I have to take photos, make notes, and then try to understand the material." (Interview with student RSA, 2025)

Extract 68

"However, I sometimes feel anxious when technical issues occur, such as internet disrup-

tions." (Interview with student RFL, 2025)

Extract 69

"I feel happy, but sometimes nervous. English lessons usually take place during the third or fourth time, when we are already getting tired. The nervousness occurs when the teacher asks questions directly." (Interview with student SRA, 2025)

Extract 70

"There are some students who do not respond. One contributing factor may be that they do not understand the material being delivered." (Interview with teacher IN, 2025)

Extract 71

"Yes, there are students like that. They usually ask their peers whom they consider more knowledgeable." (Interview with teacher SN, 2025)

Extract 72

"When the results are unsatisfactory, they usually ask, 'Why is my grade low" (Interview with teacher FS, 2025)

Extract 73

"Generally, they accept their assignment results well, although some may feel that the outcomes do not meet their expectations." (Interview with Teacher HR, 2025)

Extract 74

"Students who can answer questions quickly tend to feel more pleased compared to those who struggle and end up remaining silent." (Interview with teacher SRF, 2025)

Extract 75

"Students demonstrated signs of anxiety during quizzes conducted via Kahoot, difficulties in understanding materials presented through YouTube, and dissatisfaction with quiz results." (Classroom Observation, 2025)

3.3. Cognitive Engagement

The following evidence illustrates students' cognitive engagement in digital literacy-based instruction in the English classroom. The indicators used to identify this engage-

ment include flexibility in problem-solving, a preference for hard work, and the use of positive coping strategies in the face of failure.

3.3.1. Flexibility in Problem-Solving

Students demonstrated great adaptability in confronting problems throughout digital literacy instruction. When they faced challenges in comprehending the teaching content, they proactively pursued alternative solutions, such as leveraging Google, employing artificial intelligence technologies, watching instructional videos, and participating in discussions with peers and educators. This conduct demonstrates a robust sense of learner autonomy and a flexible application of technology. Instead of relying on a single source, students analysed multiple sources to develop a more comprehensive understanding. They demonstrated critical thinking abilities by assessing material from many sources, including recognising inconsistencies in explanations across several websites. Digital learning settings afforded them the autonomy to select learning tactics that correspond with their interests. This adaptability is essential for promoting cognitive growth and cultivating an autonomous, analytical approach to problem-solving.

Extract 76

"If I already understand, I will answer. If not, I look for references on Google. Sometimes, I find inconsistencies between websites during group discussions and while searching for materials online. Not all websites provide the same explanations." (Interview with student ZHR, 2025)

Extract 77

"In my view, learning styles should be varied. Sometimes using digital technology, other times using manual methods, so that the process does not become too monotonous or overly serious." (Interview with student NRM, 2025)

Extract 78

"I often help with translation. However, emotionally, I still feel enthusiastic." (Interview with student STI, 2025)

Extract 79

"I tend to prefer digital options because they

are more practical. I can work on them anywhere, whether at home or while hanging out." (Interview with student IZZ, 2025)

Extract 80

"If there is an assignment I do not understand, I usually search for information using AI or watch explanatory videos." (Interview with student RSA, 2025)

Extract 81

"If I do not understand something, I usually use AI to search for answers." (Interview with student CTR, 2025)

Extract 82

"If I do not understand the material, I ask the teacher directly. If permitted, I will use Google or other sources to look for answers." (Interview with student PTR, 2025)

Extract 83

"If an assignment is given with a deadline of several days, I look for instructional videos at home to better understand the material." (Interview with student SRA, 2025)

Extract 84

"Students who are given the freedom to use their devices to search for information tend to be more active. They can find answers quickly, which makes the classroom atmosphere more dynamic. For example, some students suggest more efficient ways of completing tasks, such as creating PowerPoint presentations for summaries." (Interview with teacher SRF, 2025)

Extract 85

"Some students struggle to follow the lessons, but they become more enthusiastic and interactive when I use digital media such as YouTube and animated visuals." (Interview with teacher FS, 2025)

Extract 86

"Students utilised various forms of media to complete assignments given by the teacher. Some students used smartphones to access applications such as YouTube, AI tools, and Google for task completion and group discussions." (Classroom Observation, 2025).

3.3.2. Preference for Hard Work

Students expressed a pronounced propensity for active participation in digital literacy-focused English learning. A substantial number of them favoured a comprehensive understanding of the provided instructions before undertaking their tasks, demonstrating a distinct dedication to the quality of their work. They often eschewed procrastination, choosing to finalise their work promptly, frequently utilising tactics such as precise language construction and the organisation of excellent presentations. This discipline was bolstered by their genuine interest in digital media, which made the learning process more practical and enjoyable. Many students engaged in physical and cognitive activities during instruction, including note-taking, inquiry-based learning, presentation delivery, and the timely submission of assignments. Teachers noted that students with consistent access to digital devices and stable internet connections exhibited greater organisation and efficiency in their academic tasks. This suggests that students' diligence is not merely a function of motivation but is also intricately connected to their ability to manage resources and time efficiently within the evolving landscape of digital Education.

Extract 87

"First, I try to understand the question. If I understand it, I answer it. If not, I search for references on Google." "I feel happy because it is easier to complete." (Interview with student ZHR, 2025)

Extract 88

"I also engage physically, for example, by completing assignments, presenting materials in front of the class, and providing explanations." (Interview with student RFL, 2025)

Extract 89

"I participate in presentations, question &answer sessions, and group discussions. I also take notes and submit assignments." (Interview with student NRM, 2025)

Extract 90

"I often volunteer to answer or come forward to the front of the class. Digital assignments are more flexible because they can be edited in case of mistakes." (Interview with student STI, 2025)

Extract 100

"Because I enjoy learning English, I do not find it difficult to complete assignments on time." (Interview with student IZZ, 2025).

Extract 101

"I always make sure that I understand the material first before working on the assignment." (Interview with student CTR, 2025)

Extract 102

"I begin by understanding the material, then write with a clear structure."

"I always ensure that I have understood the instructions before starting the task." (Interview with student RCH, 2025)

Extract 103

"I complete assignments immediately without procrastinating to avoid accumulating tasks." "If I do not understand something, I ask the teacher directly or look it up on Google." "I usually review and learn from my mistakes." (Interview with student PTR, 2025)

Extract 104

"I search for educational videos at home to better understand the material." (Interview with student SRA, 2025)

Extract 105

"Students with adequate devices and stable internet connections usually complete tasks more quickly because they can directly search for the necessary information." (Interview with teacher SRF, 2025)

Extract 106

"Most students demonstrate enthusiasm for digital-based learning. They feel more challenged and tend to complete assignments within time because they feel more organised and ready to work hard." (Interview with teacher SN, 2025).

3.3.3. Positive Coping in the Face of Failure

Students' reactions to failure in digital learning are predominantly helpful. Individuals typically do not concede defeat upon receiving low grades or unsatisfactory outcomes; instead, they proactively endeavour to identify the origins of their mistakes by engaging with teachers or independently reviewing their work. Numerous students indicated their intention to rectify and analyse their errors to improve comprehension, even endeavouring to develop new example sentences to solidify the topic.

This behaviour exemplifies significant cognitive engagement when students accept the outcomes and utilise them for reflection and self-enhancement. Teachers noted that students often participate in discussions regarding their errors and proactively solicit criticism to enhance their performance. This coping approach embodies the belief that failure is not a conclusion but a significant learning opportunity. This is especially important in digital literacy, where the educational landscape changes swiftly, necessitating students to adapt and glean insights from each obstacle.

Extract 107

"Yes, I was disappointed, but I accepted the result." *(Interview with student RSA, 2025)*

Extract 108

"Yes, I have experienced it, but our teacher was kind. They usually provided feedback, so I did not feel disappointed." *(Interview with student IZZ, 2025)*

Extract 109

"I usually review and learn from my mistakes. For English, I try to create new example sentences to improve my understanding." *(Interview with student PTR, 2025)*. "If I make a mistake, I correct myself. Sometimes, the teacher also makes mistakes in their explanation. When that happens, we try to give feedback to the teacher." *(Interview with student SRA, 2025)*

Extract 110

"When students receive unsatisfactory results, they usually discuss and ask questions like, 'Why did I get this result?' or 'What was wrong with my answer?' They try to understand their mistakes in order to improve." *(Interview with teacher IN, 2025)*

Extract 111

"Students who are dissatisfied with their assignment results usually ask why they received a low score and make efforts to correct their mis-

takes to achieve better outcomes in the future."
(*Interview with teacher FS, 2025*)

Extract 112

"Some students appeared to be dissatisfied with the feedback provided by the teacher during classroom tasks and in response to their questions. However, once the teacher offered a detailed explanation, all students accepted the feedback and could identify the areas in which their work was lacking." (*Classroom Observation, 2025*).

Figure 7 depicts a taxonomy of student engagement in digital literacy-based instruction.
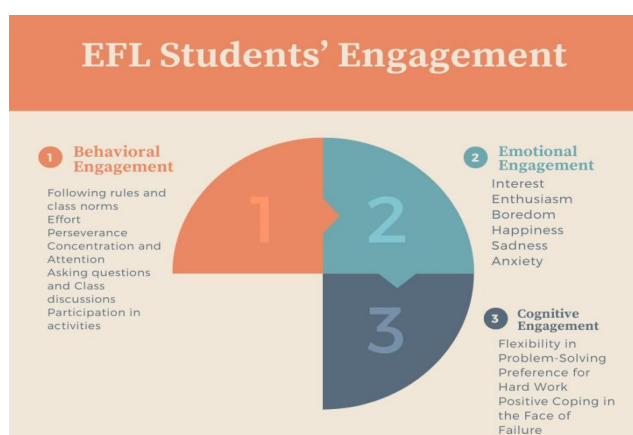
Figure 7. Taxonomy of EFL students' engagement in EFL Classrooms.

The findings suggest that behavioural engagement indicates students' commitment to adhering to classroom rules and actively participating in learning activities. In EFL classrooms focused on digital literacy, students demonstrated considerable discipline in employing digital devices solely for academic objectives. They consistently demonstrated punctuality, compliance with established regulations, and active participation in conversations, collaborative activities, and digital assessments. These behavioural patterns suggest the existence of an organised learning environment where students take responsibility for their Education. Their capacity for successful collaboration and sustained focus throughout classroom activities demonstrates their active participation and willingness to engage with various learning methods. This behavioural discipline greatly enhances academic performance, especially in technologically augmented educational environments.

Emotional engagement pertains to students' affective reactions to learning activities. Students demonstrated passion, curiosity, and enjoyment in digitally integrated EFL classrooms while engaging with multimedia tools, such as YouTube, music, and Kahoot quizzes. These affirmative emotional reactions fostered a more vibrant classroom environment and improved learning efficacy. Despite facing challenges, students regulated their emotional responses by utilising tactics such as seeking help or employing digital resources to enhance their understanding. Instances of boredom or anxiety were generally linked to repetitive content or technical difficulties. The emotional connections developed through technology-enhanced learning enhanced student motivation and resilience.

Cognitive engagement refers to students' mental commitment to learning, particularly in critical thinking and self-regulated learning techniques. Students exhibited significant independence in problem-solving by utilising artificial intelligence, audiovisual materials, and other digital resources. They interacted thoughtfully with educational resources before finalising assignments and demonstrated Perseverance in refining their work. Despite experiencing failure, their coping mechanisms, such as seeking clarification or participating in self-reflection, demonstrated a growth-oriented perspective. Digital literacy tools empower students to tackle tasks with adaptability and to consider innovative approaches. Active cognitive engagement is essential for fostering meaningful learning experiences and promoting English language acquisition in contemporary classrooms.

3.4. Culture Themes

3.4.1. Digital Discipline and Classroom Norms as Cultural Practice

This theme highlights how behavioural engagement in digital literacy-based learning is shaped by culturally shared expectations and negotiated norms between teachers and students. Students at SMA Negeri 10 Kota Ternate internalised and practised digital responsibility, such as using devices strictly for learning, adhering to punctuality, and following class agreements. These practices indicate a culturally embedded sense of collective accountability, where digital tools are integrated not merely as technology but as instruments

mediated by shared educational values and behavioural expectations.

> *"Devices were employed effectively as educational instruments rather than for recreational use... This conduct demonstrates a shared recognition of the significance of order and accountability as essential elements of the learning process."* (Findings, Behavioural Engagement).

3.4.2. Emotional Connectedness through Culturally Relevant Digital Media

Students' emotional engagement in EFL classrooms was strongly linked to the cultural relevance and resonance of digital content, including music, storytelling, YouTube, and Kahoot. These forms of digital engagement aligned with students' everyday digital practices, allowing them to feel enjoyment, confidence, and enthusiasm. The emotional connection formed through the use of localised and familiar digital content reflects a cultural adaptation of learning that converges emotion, entertainment, and Education.

> *Participants expressed pleasure and heightened motivation when teachers used digital media, including YouTube videos, English music, digital quizzes, and storytelling activities... Technology was regarded not just as a tool but as a medium that augmented participation and made classroom information more pertinent to students' daily experiences."* (Findings, Emotional Engagement)

3.4.3. Autonomy and Adaptive Learning as Expressions of Digital Agency

Cognitive engagement among students was manifested through flexible problem-solving, self-initiated learning, and resilience in facing academic challenges. Students employed various digital tools, including Google, AI, and educational videos, to navigate learning tasks. These behaviours reflect a broader cultural shift toward learner agency, where digital literacy empowers students to become self-regulated and reflective learners. The ability to adapt and make autonomous decisions in learning represents a cultural transformation in how students perceive and perform their academic identities.

> *"Students demonstrated great adaptability... they proactively pursued alternate solutions, like leveraging Google, employing AI technologies, watching instructional videos, and participating in discussions... This conduct demonstrates a robust sense of learner autonomy and a flexible application of technology."* (Findings, Cognitive Engagement)

4. Discussion

Student engagement is a crucial factor influencing good learning outcomes, especially in technology-enhanced settings where learners are expected to interact independently and significantly with digital content. Student engagement in classroom interactions is essential for promoting effective learning. Piaget emphasised that the most effective form of learning occurs through collaboration, where learners interact with their environment and peers[34]. The findings of this study demonstrate that learning centred on digital literacy has significantly enhanced EFL student engagement, primarily through the use of multimedia content, gamified applications, and flexible material access. Students indicated heightened interest and active involvement when utilising digital platforms, such as YouTube, Kahoot, and AI tools like ChatGPT. These findings align with the principle of technology-mediated learning, which asserts that technology has motivational benefits in language education[35,36].

Furthermore, students' engagement fosters favourable academic outcomes, especially in nurturing classrooms characterised by genuine activities, autonomy, and organisation[37]. This study identifies that engagement, which encompasses cognitive, behavioural, and emotional dimensions, is essential for effective learning and success. It fosters deep learning, Perseverance, and intrinsic motivation, improving students' academic performance and well-being and highlighting its significance in educational contexts[38]. The students' increased involvement was frequently ascribed to the multimodal characteristics of the learning materials.

The utilisation of digital literacy, both visual and auditory resources, not only engaged their attention but also enhanced comprehension, especially in vocabulary and listening exercises. This discovery corroborates multimedia learning theory[39], which posits that dual-channel process-

ing (combining visual and aural channels) enhances memory retention and comprehension. Furthermore, apps such as YouTube and TikTok enable students to engage with authentic English content in casual, familiar formats, thereby connecting classroom instruction with practical language application [40]. Enhanced engagement was also observed in the interactive and gamified aspects of digital tools. Applications like Kahoot and Quizzes have revolutionised conventional evaluations into competitive, game-oriented experiences, fostering increased student engagement and prolonged focus throughout courses [41]. Gamification in language learning contexts enhances motivation and engagement, particularly among younger students [41]. In the observed classrooms, these gadgets generated enthusiasm and facilitated formative learning through immediate feedback and cooperative play. It is essential to emphasise that student participation was not evenly distributed among all learners. Some learners displayed robust autonomous learning tendencies, while others depended significantly on teacher assistance and showed limited initiative beyond controlled digital assignments. This mismatch illustrates the difference between behavioural engagement (task participation) and emotional engagement (interest and enjoyment), indicating that technology may augment one without necessarily enhancing the other [42]. Furthermore, student engagement plays a vital role and has a profound influence on learning outcomes. Educators must guarantee that students engage in behavioural, emotional, and cognitive processes. This encompasses engagement in classroom activities, enthusiasm, motivation, analytical reasoning, comprehension of the educational objectives, and assuming responsibility for the learning process [43].

Another vital observation relates to contextual equity. Despite the prevailing enthusiasm for digital learning, not all students had equitable access to devices or reliable internet connections, resulting in disparities in participation. These findings align that digital learning environments should be evaluated based on access, participation, and advantage [44]. Multiple research investigations have emphasised the beneficial correlation between digital literacy and EFL learning outcomes, highlighting the necessity for extensive teacher training, enhanced digital infrastructure, and the incorporation of digital literacy into the EFL curriculum [45,46]. Moreover, engagement is a multifaceted word that entails an individual's active and significant participation in an activity or undertaking. It encompasses emotions, cognitive interpretation, and exertion to attain objectives [47]. Engagement is a variable process that varies according to the activity's characteristics, personal motivation, and social environment. This aligns with the theory of social constructivism, which posits that cognitive development occurs through engagement with others within a social and cultural context [48]. In the area of EFL education, the incorporation of digital literacy into the curriculum has had a favourable impact on teaching and learning outcomes. Prior studies have shown that digital literacy enhances multiple facets of language acquisition, encompassing reading comprehension, speaking abilities, and general language competency [49,50]. In conclusion, although digital literacy education has significantly enhanced student engagement in EFL classrooms, adopting a nuanced perspective that accounts for individual learner characteristics and contextual constraints is crucial. Future educational initiatives must prioritise individualised learning, structured digital independence, and fair access to fully harness the advantages of digital engagement for all students.

In the context of cultural themes, the findings of this study illuminate three interrelated cultural themes—digital discipline and classroom norms, emotional connectedness through culturally relevant media, and student autonomy as digital agency—that characterise EFL student engagement in digital literacy-based instruction. The first theme, digital discipline, aligns with sociocultural theory, where social norms mediate learners' behaviours [51]. Students' adherence to device-use agreements and punctuality indicates that behavioural engagement is shaped by culturally negotiated expectations, supporting the view that learning is embedded in social interaction [52]. Emotional connectedness emerged as a salient theme when students interacted with locally relevant digital materials, as supported by multimedia learning theory, which emphasises the motivational benefits of dual-channel input [53]. The integration of YouTube, music, and digital quizzes not only sustained attention but also resonated with students' digital life worlds. An observation supported that culturally attuned digital content fosters deeper affective engagement in language learning [54]. However, unlike findings in Western contexts, where gamification may become routine [55], it retained novelty here, suggesting contextual variability. Finally, the theme of student autonomy and adaptive learning underscores the emergence of digital agency.

Students' use of AI, search engines, and online videos to resolve learning challenges illustrates the shift from teacher-centred to learner-directed practices[56]. This challenges traditional classroom hierarchies and supports a postmethod pedagogy that values learner initiative[57]. These themes suggest that digital engagement in EFL classrooms is not merely technological, but deeply cultural and situated. Digital literacy encompasses a comprehensive array of skills, including cognitive, physical, social, and emotional competencies, all of which are essential for effective engagement in a digital society[58]. The significance of digital literacy in Education is well recognised, especially in cultivating autonomous, critical thinkers capable of connecting their experiences within and outside the classroom[59]. Digital literacy is a complex notion that includes diverse social, political, economic, and cultural dimensions, and it significantly influences modern Education, culture, society, and community development in the digital age[60].

5. Conclusion

This ethnographic inquiry reveals that digital literacy-based instruction significantly enhances student engagement in Indonesian EFL classrooms across behavioural, emotional, and cognitive dimensions. Students demonstrated behavioural engagement through adherence to classroom norms, punctuality, and active participation in digitally mediated tasks. Emotional engagement emerged through students' heightened interest, enthusiasm, and enjoyment, particularly when learning materials incorporated culturally relevant digital media such as YouTube, music, and interactive quizzes. Despite occasional boredom or anxiety linked to technical difficulties or repetitive content, the overall affective responses were predominantly positive. Cognitive engagement was characterised by students' autonomous learning behaviours, including flexible problem-solving, critical thinking, and resilience in the face of academic challenges. These findings underscore that engagement in digital learning environments is not merely a function of technology access but is deeply embedded in the sociocultural practices, emotional dispositions, and intellectual agency of learners. The study further identifies three interconnected cultural themes—digital discipline and classroom norms, emotional connectedness through localised media, and learner autonomy as digital agency—that shape student engagement in meaningful ways. These insights suggest that digital literacy is not a neutral or universal concept, but rather one that is contextually negotiated and culturally situated. As such, fostering engagement in EFL classrooms requires not only the integration of digital tools but also pedagogical sensitivity to students' lived experiences, cultural backgrounds, and technological realities. For policymakers and educators, the findings underscore the need for equitable infrastructure, inclusive digital pedagogies, and ongoing professional development to bridge the engagement gap and harness the transformative potential of digital literacy in language education.

Author contributions

A.F.M. started the study concept, formulated the theoretical framework, executed the primary literature review, and composed the preliminary manuscript. Conducted field data collecting, transcription, and qualitative data processing, identifying key concerns and contributing to the methodology and discussion parts of the findings. M.M. Data analysis and the final editing of the manuscript. S.W. Conceptual insights to the theoretical framework and engaged in data validation and triangulation procedures, proofreading, refined the analysis section, and ensured the coherence of the article's points. M. Evaluation of extra material and academic language refinement, development of study results and implications, and assessment of the manuscript's adherence to journal formatting standards.

Institutional Review Board Statement

No applicable.

Informed Consent Statement

The study was conducted according to the existing regulations in Indonesia and the policies of the researcher's affiliated university. All participants in this study voluntar-

ily and knowingly gave their informed consent to disclose information during the fieldwork phase.

Data Availability Statement

No applicable.

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Conflicts of Interest

The authors declare that they have no conflict of interest.

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