

Exploring the Potential of Microlearning for Toefl IBT Preparation Among High School Students

Muhammad Faizal Rizky¹, Nurhikmah H^{2*}, Farida Febriati³

¹ Educational Technology, Universitas Negeri Makassar, Indonesia
Email: fzlrizky@outlook.com

² Educational Technology, Universitas Negeri Makassar, Indonesia
Email: nurhikmah.h@unm.ac.id

³ Educational Technology, Universitas Negeri Makassar, Indonesia
Email: farida.febrati@unm.ac.id

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Abstract. The aim of this needs analysis is to investigate the potential of microlearning as a learning approach to prepare high school students for the TOEFL iBT. Microlearning is an instructional method that involves brief participation in an activity that is intended to yield a specific result. While prior research has shown its benefits in encouraging independent learning, reducing mental fatigue, and preventing demotivation and cognitive impairments, most studies have focused on adult learners, with only a small fraction conducted in high school settings. In Indonesia, certificates of English aptitude tests, such as TOEFL iBT, are necessary for higher education and job applications. However, the topic and skills are rarely discussed in schools, resulting in many high school graduates being unprepared for the exam. Typically, students resort to private institutions or tutors to acquire the necessary skills, but the associated costs and time commitment can be discouraging. Therefore, it is essential to examine the perceived importance of TOEFL iBT, learning difficulties, and learning preferences. The findings will inform recommendations on integrating microlearning into the existing educational framework. Future studies should explore microlearning themes further, expand research to high school context, and explore mobile-based microlearning.

Keywords: microlearning; TOEFL iBT; high school.

INTRODUCTION

English language proficiency has become a crucial requirement for higher education and employment opportunities in the globalized world. In countries like Indonesia, certificates of English aptitude tests, such as the Test of English as a Foreign Language (TOEFL) iBT, hold significant value for individuals aspiring to pursue further studies or enter the job market (Hardianto et al., 2021; Utomo &

Damayanti, 2019). However, the integration of standardized English tests into the high school curriculum is often limited, leaving many high school graduates unprepared to take the TOEFL iBT exam.

To bridge this gap and enhance students' readiness for TOEFL iBT, private institutions and tutors have emerged as alternative sources for skill development. Nonetheless, the costs and time commitments associated with these options can be discouraging for some students, limiting

their access to adequate TOEFL iBT preparation (Kim, 2021). For many families in Indonesia, the monthly cost of private tutoring can reach up to half of their household income, making it financially burdensome. Additionally, the extra hours required for tutoring, typically one to three hours on top of the 8-9 hours spent in school, can lead to exhaustion and potential conflicts with other academic or extracurricular commitments.

Many students who opt for independent learning, primarily relying on web-based resources, still face certain challenges (Hall & Batty, 2020; Lassoued et al., 2020). The majority of learning materials available online are in English, which may pose difficulties for some students with limited language proficiency. Moreover, the few resources available in the Indonesian language often lack comprehensive coverage of all four essential language skills, namely reading, listening, speaking, and writing.

As an emerging learning method, microlearning presents a promising approach to address the challenges faced by high school students preparing for the TOEFL iBT exam. Microlearning is characterized by its short, targeted learning activities designed to achieve specific learning outcomes (Smyrnova-Trybulska et al., 2022). Microlearning can break down the complex and lengthy skills required for the TOEFL iBT, thereby eliminating the need for long and overwhelming study sessions (Javorcik & Polasek, 2019; Sirwan Mohammed et al., 2018). Additionally, the popularity of microlearning in web-based or mobile learning environments makes it well-suited for high school students who often rely on digital resources for their studies (Dolasinski & Reynolds, 2020; Lee et al., 2021).

Previous research has demonstrated that microlearning is an effective method for independent and personalized learning, resulting in improved retention and learning outcomes compared to traditional classroom study sessions (Taylor & Hung, 2022). However, the majority of microlearning studies have predominantly focused on adult learners, with only limited exploration in K-12 school settings. While there is limited research specifically on the use of microlearning for TOEFL iBT preparation, the benefits of microlearning suggest that it could be an effective method for studying for the exam.

This research aims to investigate the suitability of microlearning to enhance TOEFL iBT readiness among high school students in Indonesia. By exploring the potential of

microlearning in this context, we seek to identify effective learning preferences and attributes related to the delivery method, language, platform, media, and duration that are well-suited for TOEFL iBT preparation.

The primary objectives of this study are as follows:

1. To assess the learning difficulties faced by high school students in preparing for the TOEFL iBT exam.
2. To identify the learning preferences of high school students concerning the delivery method, language, platform, media, and duration for TOEFL iBT preparation.
3. To examine the potential of microlearning as a supplementary learning approach for TOEFL iBT preparation among high school students in Indonesia.

This research holds significant implications for improving TOEFL iBT readiness among high school students in Indonesia. By exploring the potential of microlearning as a supplementary learning approach, this study seeks to provide valuable insights into effective and accessible strategies for TOEFL iBT preparation. The findings of this research can inform educators, policymakers, and curriculum developers on integrating microlearning effectively into the educational framework to better prepare high school students for the TOEFL iBT exam.

METHOD

In July 2023, we conducted a questionnaire survey at 17th State Senior High School of Makassar, which is considered one of the most reputable high schools in the city. The deadline for the survey responses was July 30, 2023. The participants in this research consist of 71 students who meet the following criteria: (1) Having an English score of at least 75 for the last two semesters, indicating a sufficient level of language proficiency; (2) Familiarity with web-based learning, demonstrating prior experience with online educational resources; (3) Motivation to pursue higher education, as an indicator of their interest in academic advancement; (4) Involvement in English extracurricular activities or enrollment in English courses, showcasing their engagement in language-related learning opportunities; (5) Active pursuit of English language learning independently, displaying a proactive approach to language skill development.

The questionnaire items included: (1) students' familiarity with standardized English tests; (2) perceived importance; (3) their current English competence; (4) actual learning difficulties; (5) causes of learning difficulties; and (6) learning preference. All the questions in the survey are closed-ended. Parts 1 to 5 utilize a 5-point Likert scale, while part 6 employs single and multiple-choice questions. The survey followed ethical considerations regarding the involvement of underage participants, ensuring that no personal information, such as names, gender, and contacts, was collected. To collect questionnaire responses, a web-based system was utilized. In instances of duplicate responses from the same participant, only the most recent response was considered, and the others were excluded. The collected data underwent statistical analysis using descriptive statistics to provide a concise summary and description of the data. The questions using a 5-point Likert scale will be transformed into a numerical scale to enhance clarity in terms of distribution, trends, and comparability.

During the second phase of data collection, structured interviews were conducted with participants who provided consent for further participation. These interviews allowed for a more focused and in-depth exploration of students' perspectives on microlearning and its potential role in TOEFL iBT preparation. The integration of both quantitative and qualitative analyses from the survey and interviews will lead

to a comprehensive understanding of how microlearning can address the challenges encountered by Indonesian high school students as they prepare for the TOEFL iBT exam.

RESULTS AND DISCUSSION

Results

We collected responses from 76 participants, with 5 of them being deemed invalid. Almost half of the respondents are 10th-grade students, followed by 11th-grade students, while 12th-grade students make up the smallest portion in Table 1.

Familiarity with TOEFL iBT

Apart from the first question concerning the standardized English test itself, the findings presented in Table 2 indicate that 12th-grade students exhibit the highest level of familiarity with the test. They demonstrate a comprehensive understanding of the test's structure, content, and implications for their academic and future endeavours. Conversely, the data reveals that 10th-grade students possess the lowest level of familiarity when compared to their peers in higher grades. This suggests that the exposure and knowledge regarding the TOEFL iBT test tend to increase as students progress through their high school years, with 12th-grade students being the most informed and 10th-grade students being the least.

Table 1. Participants

Grade	n	%
N/A	5	6.6
10th-grade	36	47.3
11th-grade	21	27.7
12th-grade	14	18.4

Table 2. Average score about familiarity (1 = Very unfamiliar; 5 = Very familiar)

#	Item	Familiarity			
		10th-grade	11th-grade	12th-grade	MEAN
1	Standardised English tests	3.4	4.4	4.0	3.9
2	Sections & scores	2.7	3.1	3.7	3.2
3	Test format	2.6	3.0	3.7	3.1
4	Test fee	2.4	2.6	3.2	2.7

According to the interviewees, 10th-grade students have only heard about the test briefly, with limited details mentioned somewhere. In contrast, 11th-grade students primarily acquire information about the test from the internet or through discussions, and they grasp the significance of the test. As for 12th-grade students, the interviews reveal that they are highly aware of the test and have formulated plans or anticipations about it, with some of them actively seeking additional knowledge about the exam. Furthermore, 32 respondents (45%) stated that TOEFL iBT had been discussed or used as a learning reference in their classrooms. Other than that, a larger number of students choose to study English independently (39%) rather than opting for private courses or tutoring (25%).

Perceived Importance

This section focuses on assessing the perceived importance of English language skills among the students, with only three responses indicating that these skills are considered "Less Important." Table 3 presents notably high scores across all questions, with 12th-grade students obtaining the highest scores, followed by 11th-grade students, and then 10th-grade students. The data suggests that students in their final year of

high school hold the highest regard for English language skills, demonstrating a progressive understanding of its significance as they advance through their academic journey.

The interviews revealed that 12th-grade students are well aware of the importance of English skills for final exams, university entrance exams both domestically and internationally, and job applications. Similarly, 10th and 11th-grade students share the same view, but they feel they still have ample time to prepare themselves. When asked if the students still feel the need to improve their English skills, 100% of 12th-grade students expressed a strong interest, while 95% of 11th-grade and 72% of 10th-grade students also indicated the same level of interest.

Self-Perception

This section measures the students' perceptions of their proficiency in five general English skills: reading, listening, writing, speaking, and grammar. Table 4 indicates that among these skills, reading is rated the highest, while grammar has the lowest score. Although with a narrow margin, 12th-grade students still have a higher average perception (3.57) compared to 11th-grade (3.47) and 10th-grade students (3.39).

Table 3. Average score about perceived importance (1 = Not important; 5 = Very important)

#	Item	Importance			
		10th-grade	11th-grade	12th-grade	MEAN
8	Knowing about TOEFL iBT exam	4.3	4.6	4.9	4.6
9	Taking TOEFL iBT exam	4.1	4.3	4.6	4.3
10	English skills for finishing school	4.6	4.7	4.8	4.7
11	English skills for university admissions	4.6	4.6	4.7	4.6
12	English skills for future career	4.5	4.8	4.8	4.7

Table 4. Average score about self-perception (1 = Not skilled; 5 = Highly skilled)

#	Item	Self-perception			
		10th-grade	11th-grade	12th-grade	MEAN
16	Reading skills	3.7	3.9	3.9	3.8
17	Listening skills	3.3	3.6	3.5	3.5
18	Writing skills	3.3	3.3	3.5	3.4
19	Speaking skills	3.5	3.5	3.5	3.5
20	Grammatical skills	3.0	2.9	3.2	3.0

Almost 70% of 10th-grade interviewees admit to frequently using English for academic purposes, while only 47% use it for daily social interactions. Among 11th-grade students, 52% use English for academic purposes, and 57% for daily interactions. A higher proportion is observed among 12th-grade students, with 100% using it for academic purposes and 78% for daily interactions. When asked about their confidence in their English language proficiency for higher education and future career, 58% of 10th-grade students feel confident, along with 42% of 11th-grade students, and 57% of 12th-grade students.

Actual Learning Difficulties

This section (presented in Table 5) measures the activities or subskills in the TOEFL iBT exam that are considered difficult by the students. According to 10th-grade students, listening is the easiest activity, while writing is the most challenging. 11th-grade students also

find writing the most difficult, although they consider vocabulary the easiest. On the other hand, 12th-grade students find listening the easiest, while reading and speaking are the most challenging. Similar to the trends in previous sections, 10th-grade students face the most significant difficulty (3.37 on average), followed by 11th-grade students (3.52), and then 12th-grade students (3.64).

Two other aspects that need to be considered regarding the TOEFL iBT exam are the limited time duration and the internet-based format. Out of 36 respondents in 10th grade, 10 students are comfortable with the time limit, and 15 feel confident about taking online tests. The numbers are lower among the older students, with only 6 from the 11th grade and 7 from the 12th feeling comfortable with the test duration. For online tests, 7 from the 11th grade and 10 from the 12th grade are confident about their chances.

Table 5. Average score about the actual learning difficulties (1 = Very difficult; 5 = Very easy)

#	Item	Difficulty			
		10th-grade	11th-grade	12th-grade	MEAN
22	Vocabulary in academic passages	3.5	3.7	3.6	3.6
23	Text comprehension & analysis	3.3	3.6	3.5	3.4
24	Understanding conversations & lectures	3.8	3.6	4.0	3.8
25	Writing arguments & academic essays	2.8	3.1	3.7	3.2
26	Expressing & discussing ideas verbally	3.2	3.4	3.5	3.3

Table 6. Average score about causes of difficulties (1 = Not relevant; 5 = Highly relevant)

#	Item	Relevance			
		10th-grade	11th-grade	12th-grade	MEAN
29	School curriculum	3.3	2.2	2.7	2.7
30	Motivation	4.3	4.5	4.5	4.4
31	School schedule	3.2	3.2	3.4	3.3
32	Courses/tutoring fee	3.1	2.8	2.9	2.9
33	Access to learning materials	3.4	3.8	4.1	3.8
34	Access to media in the English language	4.1	4.4	4.5	4.3
35	Environment	3.0	2.8	4.2	3.4
36	Support from school/teachers	3.7	3.1	3.6	3.5
37	Support from friends	3.7	3.6	4.2	3.8
38	Support from parents/family	4.2	4.0	4.4	4.2
39	Exam anxiety	3.3	3.4	3.4	3.4

Causes of Learning Difficulties

This section (presented in Table 6) investigates the factors that contribute to difficulties in learning English, both within school settings and through self-study. All three groups of students share the same opinion on the most influential factors, which are personal motivation (mean = 4.4), the habit of consuming English media (4.3), and support from parents or other family members (4.2). They also agree that the school curriculum (2.7) is least relevant in preparing them for standardized English tests like TOEFL iBT. Two other significant challenges are the expensive cost of courses from private institutions/tutors (2.9) and the busy school schedule (3.3), which limits their ability to take extra lessons outside of school hours. The seniors have more English language exposure in their surroundings (4.2) and receive more positive support from their peers (4.2) compared to 10th (3.0 and 3.7 respectively) and 11th graders (2.8 and 3.6 respectively).

Interviews reveal that particularly 12th-grade students are quite concerned about the considerable gap between the English language skills taught in school and those required in higher education and the workforce. Most of them feel that this gap is too wide to be overcome solely through self-study, except for some students who already have a solid understanding of basic English grammar and an adequate vocabulary range. Students believe that the most realistic approach is to take extra courses from reputable institutions, and even if it may cost a lot, the results will be worth it. However, even for students with enough financial resources, it is challenging to fit extra courses into their already busy school schedules. Some interviewees mentioned having plans to further improve their English language skills after their first year of college. Around 46 respondents (approximately 65%) expressed their willingness to undergo extensive preparation before facing English language tests like TOEFL iBT.

Learning Preference

This section identifies students' learning preferences if they want to take additional classes for TOEFL iBT exam preparation. **Table 7** shows that the most preferred delivery method is independent learning, slightly ahead of in-person classes after school. Interviews reveal that the

majority of students choosing in-person classes are those involved in English clubs, which have regular schedules after school. They also consider face-to-face interaction between teachers and students as an irreplaceable component of learning. On the other hand, students opting for independent learning tend to have self-study habits and are aware of the importance of self-regulation when studying.

Regarding class size preference, small classes are the most favoured, followed by small groups and private classes. Very few students choose classes with more than 10 students as they believe it is less effective and does not provide enough opportunities for individual interaction with teachers. Small classes are considered a safe choice as students can motivate each other and engage in discussions with other classmates. Almost all students choosing private classes are the same ones who opt for independent learning as the delivery method. On the other hand, some students avoid small groups and private classes as they feel intimidated by excessive attention and academic demands directed towards them.

Students from all three grades agree that the most suitable language of delivery for their needs is a mix of English and Indonesian language, with English being dominant. The reason is that they want the language of delivery to serve as a stimulus for expanding their vocabulary and practising their listening skills. Students choosing a dominant or fully Indonesian language option state that their English proficiency is not yet sufficient to receive instructions in English. On the contrary, students selecting full English language prefer it because they are confident in their abilities and seek more challenging discussions.

The most preferred study schedule is 2-3 times per week, as it is considered frequent enough to form a constructive learning habit but not overly packed, allowing for gaps to study every other day of the week. The school schedule and fatigue factors make the option of studying 4-5 times per week highly unpopular, and no one chose to study every day. Some students are interested in the flexible schedule option because they are unsure about allocating time for extra classes. Additionally, most students who chose the flexible schedule also opted for independent learning and private classes in previous items.

Table 7. Learning preferences

#	Item	Sum	10th-grade	11th-grade	12th-grade
41	Delivery method				
	Independent learning	23	10	7	6
	Online class on weekends	5	1	3	1
	Online class after school	6	3	3	0
	In-person class on weekends	15	9	2	4
	In-person class after school	22	13	6	3
42	Class size				
	Private	14	5	7	2
	Small group (max. 5 students)	19	9	7	3
	Small class (max. 10 students)	30	16	6	8
	Medium class (max. 30 students)	7	5	1	1
	Large class (max. 60 students)	1	1	0	0
43	Language of delivery				
	English	9	5	2	2
	Indonesia	7	4	1	2
	Mixed (majority English)	41	18	13	10
	Mixed (majority Indonesia)	14	9	5	0
44	Schedule				
	Once a week	14	5	5	4
	2-3 times a week	38	19	11	8
	4-5 times a week	2	1	1	0
	Every day	0	0	0	0
	Flexible schedule	17	11	4	2
45	Learning platform				
	Website	45	22	15	8
	Mobile apps	18	6	6	6
	PC/desktop software	8	8	0	0
46	Learning media (multiple choice)				
	Video	63	30	19	14
	Audio	43	20	15	8
	Image	29	10	12	7
	Text	50	25	15	10
47	Duration				
	1-5 minutes	3	2	1	0
	6-15 minutes	21	11	6	4
	16-30 minutes	18	8	8	2
	31-60 minutes	21	10	4	7
	More than 60 minutes	8	5	2	1
48	Payment				
	Subscription	19	11	5	3
	One-time payment	18	6	8	4
	Freemium	14	10	2	2
	Completely free	20	9	6	5

As for the learning platform, websites are the top choice for several reasons. First, web-based learning is accessible via smartphones, tablets, laptops, and desktops. Second, web-based learning is compatible with various operating systems on different devices. Third, individuals already have their preferred web browsers, eliminating the need for an app or software installation.

Almost all students chose video as their preferred learning media because it offers both audio and visual elements. A small number of students who did not choose videos cited unreliable WiFi support. Text media was also popular because it is less distracting, allowing students to concentrate on specific information. Some students who did not choose audio believed its functionality is already represented in videos, while others argued that audio media is specifically necessary for listening skills. Image-based media was the least chosen, as it was perceived to contain less information than videos or audio and lacked detailed descriptions like text.

Regarding the duration of learning materials, two options were equally favoured: short duration (6-15 minutes) and long duration (31-60 minutes). Students who preferred short durations were typically the ones who previously chose independent learning, private classes, and flexible schedules. On the other hand, those who preferred long durations were the ones who previously opted for in-person classes, small-sized classes, and 2-3 times per week study schedules. A small number of students who chose durations above 60 minutes enjoyed in-depth discussions and were accustomed to studying with full concentration for extended periods. Interestingly, none of the respondents were familiar with the term "microlearning," although nearly all showed interest in trying it when explained. This lack of knowledge explains why very few chose durations of 1-5 minutes.

Regarding cost preferences, the distribution was quite even. Students who chose the subscription model believed the cost would be more manageable if spread out into periodic payments. Those who preferred one-time payments or freemium options were willing to pay if they could get the desired quality of learning. Students who chose the free option considered learning English not a current priority.

Discussion

The finding indicates that 12th-grade students demonstrate the highest familiarity with the TOEFL iBT test, showing a comprehensive understanding of its structure and implications for their future. Conversely, 10th-grade students exhibit the lowest level of familiarity. 11th-grade students acquire information about the test from the internet or discussions and understand its importance. Overall, the data emphasize the need to increase awareness and preparation for standardized English tests, particularly among younger students, and highlights the popularity of independent English learning among high school students. The need for increased awareness aligns with research findings that reveal children who are familiar with standardized tests, their duration, and the types of tests have a significant advantage over those who are not familiar with them (Shaffer & McDermott, 2020).

The findings about perceived importance suggest that students with higher grades, particularly 12th-grade students, tend to place a higher value on English language skills. They are more aware of the importance of these skills for various academic and career purposes, including final exams, university entrance exams, and job applications. On the other hand, 10th and 11th-grade students also recognize the significance of English skills but feel they have more time to prepare. This indicates a progressive understanding and growing awareness of the importance of English language proficiency as students progress through their high school years. This finding aligns with previous research on non-native English speakers, which suggests that students in high school settings often perceive improvements in their English language skills through coursework and social interaction, and that tends to increase the higher the grade level (Rhinehart et al., 2022).

Similarly, self-perception in students in higher grades indicates a more positive evaluation of their English language skills compared to their counterparts in lower grades. Particularly, they express greater confidence in their reading, listening, writing, speaking, and grammar abilities. This suggests that as students progress through their high school years, they develop a more favourable view of their English language competence and become more aware of their strengths in the various language domains. This reiterates the conclusions drawn from earlier research, which indicate that students tend to be content with their language proficiency and value English as a Second Language courses

(Rhinehart et al., 2022). Furthermore, this consistency is in line with another study that revealed students rating themselves as having "good" English language skills in areas such as understanding teachers' instructions, speaking in class, and writing in English, with the ratings progressively improving with higher grade levels (Kasuma et al., 2021). Another study also found that self-perception was positively correlated with English proficiency, suggesting that learners with higher self-perception tended to have higher English proficiency (Cheng, 2020).

Difficulties in TOEFL iBT Preparation

In the context of English as a Foreign Language (EFL), a notable phenomenon is observed where non-native students typically achieve higher scores in receptive skills, such as reading and listening, compared to productive skills, which include writing and speaking (Buehler et al., 2021). This trend can be attributed to the nature of language learning, where students need to first receive and comprehend vocabulary, grammar, and concepts in a foreign language before they can effectively use them to express their own ideas and thoughts (Magyar et al., 2022).

Receptive skills, like reading and listening, serve as the building blocks for productive skills, making them the initial stages of language acquisition (Surkamp & Yearwood, 2018). Students must grasp the meanings and structures of words and sentences before they can confidently apply them in their own spoken or written expressions. Thus, it is natural that reading and listening abilities tend to develop more rapidly than writing and speaking skills (Magyar et al., 2022).

This pattern is often observed in language classrooms, where students initially focus on building their comprehension and language receptivity through reading texts and listening to spoken materials (Sreena & Ilankumaran, 2018). As their understanding and familiarity with the language increase, they gradually progress towards producing their own written compositions and engaging in oral communication.

Similar patterns are evident in the findings of this research. The average scores in **Table 5** illustrate the sequence of skills from easiest to most challenging as listening, vocabulary, reading, speaking, and writing. These findings highlight the importance of cultivating both receptive and productive language skills in a

balanced and comprehensive language-learning approach. Providing opportunities for sufficient practice in every skill can lead to a well-rounded language proficiency, ultimately enabling students to communicate confidently and effectively in the target language (Surkamp & Yearwood, 2018).

Learning difficulties can be influenced by a myriad of factors in a student's educational journey. One key determinant is the school curriculum, as it directly shapes the content and approach to teaching. A curriculum that lacks comprehensive language instruction or fails to address individual learning needs may impede students' language proficiency development (Pak et al., 2020). Motivation also plays a crucial role in a student's ability to overcome challenges. When students lack intrinsic motivation or fail to see the relevance of learning a foreign language, they may struggle to engage actively in language learning activities (Purnama et al., 2019).

Another factor affecting learning difficulties is the school schedule, as a packed or inflexible timetable may limit opportunities for additional language learning or practice (Fiani et al., 2021; Kim, 2021). Additionally, the cost of courses or private tutoring can be a significant barrier for some students, preventing them from accessing additional support (Hultberg et al., 2021). Limited access to learning materials, especially in the English language, may hinder students' exposure to authentic resources, impacting their language acquisition. The environment, including the prevalence of English media and its use in daily interactions, can influence language exposure and language use outside of the classroom (Al Zoubi, 2018).

Furthermore, the level of support provided by the school, teachers, friends, and family can significantly impact students' language learning experience. A supportive learning environment that encourages open communication, provides constructive feedback, and fosters a positive learning atmosphere can boost students' confidence and motivation (Al Zoubi, 2018; Hoxha et al., 2020). On the other hand, exam anxiety can exacerbate learning difficulties, particularly during high-stakes language assessments like the TOEFL iBT (Aydin et al., 2020). Students' fear of failure, performance pressure, and stress can impede their ability to demonstrate their true language abilities, affecting their test scores (Silaj et al., 2021).

In the context of language proficiency assessments for tertiary students in Indonesia, a

research study concluded that the listening section of the TOEFL prediction test presents more significant challenges compared to the reading section, primarily due to the length of the audio material (Rahma et al., 2022). Another study examining Indonesian tertiary students' difficulties with the TOEFL test identified three main factors: limited basic English skills, insufficient opportunities for practice, and low personal motivation (Halim & Ardiningtyas, 2018). Furthermore, research on students' performance in the TOEFL iBT writing section revealed that cohesive and grammatical control strongly correlates with writing scores, while rhetorical organization shows a weaker correlation compared to other factors (Llosa & Malone, 2019). After all, there are limited references concerning the difficulties faced by students in each section of the TOEFL iBT, especially those conducted on high school students in Indonesia. Further studies should delve into the specific factors that contribute to the difficulties faced by high school students in Indonesia when preparing for each section of the TOEFL iBT. Investigating the influence of educational approaches, teaching methodologies, and the availability of language learning resources on students' performance could provide valuable insights for designing more effective language education programs.

Preference for TOEFL iBT Preparation

Students prefer independent learning due to its flexibility and autonomy, allowing them to set their own pace and study according to their schedule. Independent learning also enables students to focus on specific areas of interest or difficulty and explore resources that suit their learning preferences (Hockings et al., 2018). On the other hand, taking extra classes after school or on weekends may not be appealing to some students as it can be time-consuming and restrict their free time (Wege et al., 2022). Additionally, large classes may be perceived as less effective for personalized attention and engagement, while private classes can be intimidating and create pressure on individual performance. Overall, students' preference for independent learning is influenced by their desire for self-directed learning and a customized approach to their educational journey.

The students find a mix of English and Indonesian language, with English being dominant, as the most suitable language of delivery for their needs. They believe that this

approach can serve as a stimulus for enhancing their vocabulary and improving their listening skills. By incorporating more English into the language of delivery, the students aim to immerse themselves in the language and create opportunities for practical application, ultimately leading to a more immersive and effective learning experience (Gong, 2023).

The students' most preferred study schedule is 2-3 times per week, striking a balance between frequency and flexibility. This schedule is deemed sufficient to establish a constructive learning routine without becoming overwhelming (Fiani et al., 2021). By having study sessions spread out with gaps in between, they can allocate time for other activities and responsibilities, such as schoolwork and personal commitments. This approach helps maintain a consistent learning habit while allowing them to manage their time effectively and avoid burnout (Cotti et al., 2018). The students value the flexibility of this schedule, which enables them to maintain a healthy study-life balance and make steady progress in their English language learning journey (Huzefa, 2020).

The popularity of learning media among the students reveals interesting insights into their preferred learning styles. Video emerges as the most favoured medium, offering a combination of audio and visual elements that engage multiple senses and enhance comprehension. Its dynamic and interactive nature makes it engaging and enjoyable for the learners (Park, 2022). Text is the second most preferred media, appreciated for its focused and detailed information, enabling students to concentrate on specific concepts. While audio ranks third, it is highly valued for its role in developing listening skills, which are essential for language proficiency. Lastly, images are the least favoured medium, possibly due to their perceived limitations in conveying complex information compared to the other media types. Understanding these preferences can guide educators in tailoring their instructional strategies to leverage the strengths of different media and create a more effective and engaging learning experience for the students.

The students' preference for learning durations sheds light on their attention spans and learning preferences. The most favoured durations, 6-15 minutes and 31-60 minutes (tied), strike a balance between being concise enough to maintain focus and being comprehensive enough to cover essential content. The moderate length of these durations seems to be well-received by

the students. Following closely is the preference for 16-30 minute sessions, indicating that learners are receptive to slightly longer learning periods that offer more in-depth discussions. However, the least favoured options are the shortest and the longest durations, 1-5 minutes and longer than 60 minutes, respectively. This suggests that students may find very short sessions insufficient for meaningful learning, while excessively lengthy sessions may lead to reduced engagement or cognitive overload (DeLoach et al., 2021). Striking the right balance in learning durations can optimize students' attention and retention, thus enhancing the overall effectiveness of the learning experience (Feely et al., 2020).

The even distribution of cost preferences among the students reflects their diverse financial considerations and preferences for learning options. With nearly equal responses for subscription, one-time payment, freemium, and completely free options, it indicates that students have varied financial capacities and priorities when it comes to investing in their English language learning (Kim, 2021). Some students may prefer the flexibility of subscription models, allowing them to make periodic payments, while others might opt for one-time payments to access learning resources permanently. The freemium model, offering a combination of free basic access with optional paid features, seems appealing to some students. Additionally, a considerable number of students favour completely free options, possibly due to financial constraints or the availability of quality free resources (Hoxha et al., 2020). The diverse distribution highlights the importance of providing a range of cost options to accommodate students' financial situations and ensure accessibility to quality language learning resources for all.

Future research may conduct in-depth studies focusing on understanding students' preferences for independent learning, flexible schedules, web-based learning, and multimedia usage in TOEFL iBT preparation. Exploring the underlying factors that drive these preferences and their impact on students' engagement, motivation, and overall language proficiency outcomes can provide valuable insights for designing more tailored and effective language learning programs to cater to diverse student needs.

The Potential of Microlearning for TOEFL iBT

Microlearning refers to an instructional approach and content delivery system characterized by short, concentrated sessions that can be completed within a brief period, resulting in a more engaging and efficient learning experience, thereby enhancing learners' ability to retain knowledge (Dolasinski & Reynolds, 2020; Smyrnova-Trybulska et al., 2022). Studies show that microlearning, despite gaining popularity in recent years, remains a less popular learning approach in the context of K-12 education (Purnama et al., 2019; Sankaranarayanan et al., 2023). However, the findings from this needs analysis indicate the potential to implement microlearning to assist students in preparing for the TOEFL iBT exam.

The findings from the needs analysis conducted in this study indicate that students' perceptions of the importance of English language skills are positively influenced as they advance through higher grades. This suggests that as students progress in their academic journey, they become more aware of the significance of English language proficiency for their academic and future endeavours, making microlearning an appropriate approach to support their language skill development. Additionally, students in higher grades demonstrate higher self-perception scores, indicating that they are generally satisfied with their language proficiency and appreciate English language courses. Moreover, the study highlights that certain subskills in the TOEFL iBT exam, such as writing and speaking, present challenges for students. Microlearning could address these difficulties by providing focused and targeted practice in these specific areas. Furthermore, students' preferences for small classes and private learning options align with the personalized and tailored approach of microlearning, which can provide individualized support and address specific learning needs.

The fact that students prefer independent learning suggests that they value autonomy and control over their learning process. Microlearning, with its short and focused modules, aligns well with this preference, allowing students to choose when and how they engage with the content. Additionally, the study indicates that a flexible study schedule, such as 2-3 times per week, is highly favoured by students. Microlearning's adaptable nature fits perfectly

with such a schedule, allowing students to access learning materials according to their convenience.

Students' inclination towards web-based learning as their preferred platform complements the implementation of microlearning. Web-based microlearning enables students to access content on various devices, including smartphones, laptops, and tablets, promoting convenience and accessibility. This aligns with students' preference for multimedia, particularly video as the most popular medium, followed by text and audio. Microlearning can effectively utilize multimedia elements, such as short video lessons, interactive quizzes, and audio materials, enhancing engagement and promoting active learning. However, the implementation of microlearning should be regarded as a supplementary tool and should not interfere with the school curriculum. While microlearning offers numerous benefits, it is essential to ensure that it complements the existing instructional framework rather than replacing it. Integrating microlearning as an adjunct can enrich students' learning experiences, providing them with additional opportunities to reinforce their language skills and improve TOEFL iBT exam readiness, without disrupting the established educational curriculum.

Moreover, it is imperative to address other student preferences, such as the language of delivery, free access, and opportunities for engagement. As the findings indicate, a mix of English and Indonesian language, with English being dominant, is the preferred language of delivery for most students. This preference reflects their desire to use English as a stimulus for vocabulary expansion and listening skill practice. Thus, any microlearning materials should carefully consider this language preference to enhance students' engagement and motivation. Furthermore, students' preference for free access to learning materials is significant, which resonates with the concept of microlearning's accessibility. Providing free or affordable microlearning resources can increase inclusivity and ensure that all students, regardless of their financial backgrounds, have access to valuable exam preparation resources. Finally, the opportunity for active engagement in microlearning modules is vital for effective learning outcomes. Designing microlearning content with interactive elements, opportunities for self-assessment, and real-world applications can foster meaningful learning experiences,

encourage student participation, and reinforce their understanding of key concepts related to the TOEFL iBT exam.

In summary, the potential of implementing microlearning to assist students in preparing for the TOEFL iBT exam is promising. Its ability to cater to students' specific needs, encourage self-directed learning, and address challenges in language skills aligns well with the demands of exam preparation. However, successful implementation would require careful planning, integration with existing curricula, and ensuring access to suitable learning resources. By leveraging the benefits of microlearning, educational institutions can enhance students' TOEFL iBT readiness and support their language learning journey effectively.

CONCLUSIONS AND SUGGESTIONS

The research addresses critical aspects of TOEFL iBT preparation in the high school context, including learning difficulties, preferred methods, and microlearning potential. The findings from this needs analysis result in the following conclusions: (1) Productive skills (writing and speaking) are more challenging than perceptive skills (reading and listening). External factors contributing to difficulties include school curriculum, private course costs, and busy schedules; (2) High school students prefer independent learning, small class sizes, a mix of English and Indonesian language with English dominance, 2-3 study sessions per week, web-based platforms, video learning, free access to resources, and both short and long learning materials equally; (3) While not yet common in high school settings, microlearning shows promise as a supplementary tool for TOEFL iBT prep. Integrating it with the curriculum can provide accessible and engaging content without disrupting core education.

Future research may explore the effectiveness of integrating microlearning as a supplementary approach in high school TOEFL iBT preparation, assessing its impact on students' performance and motivation. Additionally, investigating the correlation between the preferred language of delivery and language proficiency outcomes, as well as further understanding students' perceptions and preferences towards different learning media, could provide valuable insights for enhancing language learning experiences in diverse

educational settings. Lastly, investigating the role of cost preferences on students' access to quality language learning resources and identifying strategies to bridge financial gaps could contribute to more inclusive and equitable language education practices.

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