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DOI : 10.32734/lwsa.v7i2.2086
Electronic ISSN : 2654-7066
Print ISSN : 2654-7058

Volume 7 Issue 2 – 2022 TALENTA Conference Series: Local Wisdom, Social, and Arts (LWSA)



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Designing Web-Based Microlearning in the English Proficiency Classroom: A Brief Perspective in the Context of Students' Preference

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Abstract

Microlearning has proven to be crucial as one of the alternative techniques for digital native learners who prefer to learn when and wherever they want. The emergence of Web-based microlearning has become an alternative solution in the context of students' preferences. Other research, however, revealed that it was more concerned with activities in language skills courses than microlearning activities on the Web. As a result, the purpose of this study is to determine how to design a microlearning web-based English proficiency classroom for its English learning activities in the context of students' preferences. This study followed ADDE's four phases (Analysis, Design, Development, and Evaluation) proposed by Richey & Klein and Putra et al. [1], [2] as the method to design the product. The findings revealed a brief perspective on English learning activities for microlearning web-based in English proficiency classrooms: there was a need to design microlearning activities since existing microlearning English activities have not sufficiently infused microlearning and Web-based. The procedures for designing the output of this study have been through four phases: 1) summarizing the facts and information gathered from the need analysis; 2) examining relevant theories to design the prototyping microlearning activities; and 3) developing scripts and digitalizing them into a Web-based. To conclude, the findings illustrate the procedures for incorporating microlearning activities that are web-based in the context of students' preferences for English proficiency classrooms at higher education levels.

Keywords: English learning activities; English Proficiency Classroom; Microlearning web-based; Students' preferences

Abstrak

Microlearning telah terbukti penting sebagai salah satu teknik alternatif bagi pembelajar digital native yang lebih suka belajar kapan dan di mana pun mereka mau. Munculnya pembelajaran mikro berbasis web telah menjadi solusi alternatif dalam konteks preferensi siswa. Namun penelitian lain mengungkapkan bahwa hal ini lebih berkaitan dengan aktivitas kursus keterampilan bahasa dibandingkan aktivitas pembelajaran mikro di Web. Oleh karena itu, tujuan dari penelitian ini adalah untuk menentukan bagaimana merancang kelas kemahiran bahasa Inggris berbasis web dan microlearning untuk kegiatan pembelajaran bahasa Inggris dalam konteks preferensi siswa. Penelitian ini menggunakan empat fase ADDE (Analisis, Desain, Pengembangan, dan Evaluasi) yang diusulkan oleh Richey & Klein dan Putra dkk. [1], [2] sebagai metode untuk merancang produk. Temuan ini mengungkapkan perspektif singkat mengenai kegiatan pembelajaran bahasa Inggris untuk pembelajaran mikro berbasis web di kelas kemahiran bahasa Inggris: terdapat kebutuhan untuk merancang kegiatan pembelajaran mikro karena kegiatan pembelajaran mikro bahasa Inggris yang ada belum cukup menanamkan pembelajaran mikro dan berbasis web. Prosedur perancangan keluaran penelitian ini melalui empat tahap: 1) merangkum fakta dan informasi yang diperoleh dari analisis kebutuhan; 2) mengkaji teori-teori yang relevan untuk merancang prototyping kegiatan microlearning; dan 3) mengembangkan skrip dan mendigitalkannya menjadi berbasis Web. Kesimpulannya, temuan ini menggambarkan prosedur untuk menggabungkan kegiatan pembelajaran mikro berbasis web dalam konteks preferensi siswa terhadap ruang kelas kemahiran bahasa Inggris di tingkat pendidikan tinggi.

Kata Kunci: Kegiatan pembelajaran bahasa Inggris; Kelas Kemahiran Bahasa Inggris; Microlearning berbasis web; Preferensi siswa

1. Introduction

Recent developments in the field of English language learning have led to a renewed interest in microlearning for native digital learners. It is generally accepted that microlearning has emerged as one of the most powerful techniques and is urgently needed as one of the solutions to mitigate learning loss since the Pasca pandemic [3]. However, according to Rizal & Sulistyaningrum, Iskandar, I., and Sulistyaningrum et al., digital learning materials are not sufficiently infused with microlearning, particularly for English learning and speaking skills [3]–[5].

Microlearning is considered to enable learners to use short chunks of time to accomplish learning activities [6], [7]–[10]. Thus, anytime, anywhere learning signifies greater duration on a task [11]. Microlearning has become widespread in the design of learning materials because it is supposed to facilitate spaced practice while improving time on task [12]. In brief, it encourages students to perform short learning activities whenever they can.

As explained earlier, microlearning has been defined as a method of studying for short periods throughout the day. These procedures lead to learner-centered, ICT-based, on-demand, individual, and flexible time and place participation during all learning activities [2]. The learning material's content (object learning) is divided into smaller pieces and provided in the format of texts, visual pictures, audio, video, virtual reality, interactive multimedia, hardware technologies, and software. [13], [14]. This strategy facilitates on-demand learning for students since it allows for the utilization of a wide range of activities and can easily be incorporated into everyday activities.

Turning now to several kinds of platforms or tools, Allela highlights the Medium Microlearning Objects (MeMOs) that can be used on a variety of platforms, including whiteboard animation, short chunks of text, infographics, flipbooks, short podcasts, Augmented Reality, Virtual Reality, QR codes, mobile apps, and short HTML pages (interactive parallax-based scrolling is short TML) [13]. One of the MeMOs is web-based, and it was claimed that web- and mobile-based English instruction assisted students in recognizing scientific publications as study findings [15]. As a result, this study focuses on how to design a web-based microlearning programme in the English proficiency classroom for its English learning activities in the context of students' preferences.

In recent literature, developing educational resources from the web has become more tempting for students. Yusof and Saadon investigated the impact of web-based language learning on students' English skills. Because of their assessments, they found that the integrative learning strategy is the most effective technique for students. [16]. Further research by Karami, Ira Irzawati, and Anastasia Ronauli Hasibuan revealed that there was an important gap in writing achievement between students who were taught using a website platform and those who were not. WBLL (Web-Based Language Learning) is the name for web-based language learning [17], [18]. It is defined as language learning done via the Internet with web-based materials and tools [19]. Previous research revealed that using instructional materials for web-based learning made learning more exciting for students. In addition, it is simple to use and access, interactive, formal, and informal learning, boosting students' academic and extracurricular performances, exposing global issues, defining for the beginner level, containing vocabulary, spelling, and pronunciation, and evaluating via online, which makes it suitable for digital native learners [20]–[22].

In terms of students' preferences associated with microlearning activities, Javorcik and Polasek found that the activities of students in learning courses focused on frequently performing in the courses, communicating with the teacher, verifying their knowledge with tests, submitting correspondence tasks, and downloading study materials [23]. In other words, at this point, one effective approach promises to be the transition of traditional e-learning courses into microlearning. In short, microlearning provides MeMOs as an alternative for students to choose materials, learning activities, and assessments according to their preferences.

Based on the context provided above, this study aims to fill a gap in which the usage of website-based language learning has been increasing in many areas of life, particularly education [22]. There are few studies on the use of websites that provide activities for second language acquisition since few teachers have used this type of learning in the classroom due to a lack of resources, conditions, and environment. Furthermore, little research has been conducted to investigate the usage of short websites for a longer period, which is not appropriate for the twenty-first-century generation, not in the form of microlearning, which is frequently used for 2–15 minutes [3], [24] for each material [13]. It is preferable to create microlearning-based websites for higher-level students' English learning activities, particularly in English Language Proficiency classrooms. As a result, the goal of this research is to investigate how to design a microlearning web-based English proficiency classroom and its English learning activities in the context of students' preferences for higher student levels.

2. Method

This study modified Richey & Klein and Putra et al.'s ADDE phases, such as Analysis, Design, Development, and Evaluation [1], [2]. According to Mayfield, ADDE is widely recognized since it provides a consistent and iterative approach to follow [25].

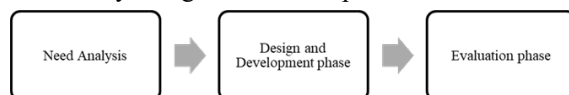


Fig. 1. Description about all of picture (e.g. Picture of Animals)

The research flow is depicted in Fig. 1, which is divided into three phases: needs analysis, design and development, and evaluation. This section delved into the three steps that comprise each phase. Documents and existing English learning resources served as data sources. The data consist of applicable theories, descriptors, analysis results, and gaps in microlearning, web-based in existing microlearning activities in English, production of Micro Learning Object Materials (MLOM) scripts, and digitalization linked to developing microlearning activities with web-based. A researcher was the instrument.

The procedure for data collection and analysis included summarising information acquired through need analysis and library research. Second, to create microlearning activities, constructing descriptors within appropriate theories of web-based (Web) and microlearning (ML). Third, selecting the materials based on the design phase and the analysis to develop Web-based English learning activities.

3. Findings

An initial objective of this study was to investigate how to design a microlearning web-based English proficiency classroom and its English learning activities in the context of students' preferences for higher student levels. Thus, this study found the procedures of designing a microlearning web-based English proficiency classroom and its English learning activities. The following research designs and activities in the design of this product can be viewed at the following phases.

The first phase is constructing micro-learning activities. At this phase, the researcher must complete the analysis by developing strategies to split the knowledge into manageable chunks and connecting the microlearning activities to the learning objectives or goals. To fill the gaps, it summarised the facts and information collected through need analysis, content analysis, and library research. This phase begins with 1) gathering existing web-based microlearning English learning activities; 2) conducting library research to look for literature reviews on microlearning and web-based learning; and 3) analysing the existing web-based English microlearning activities.

The second phase is design. This step involves researching applicable ideas, curricula, language theories, language learning, the CEFR (Common European Framework of Reference for Languages), and lesson planning to construct micro-learning activities with certain MeMOs that are relevant to English language skills.

The third phase, the development phase, entails expanding the designing phase by creating and integrating English content based on microlearning and web-based English language activities. It digitalized the scripts of English learning activities into web-based ones. To clarify, this phase has been determined through the following processes: 1) Create microlearning scripts for prototyping goods depending on the curriculum utilised in Indonesia, pertinent subjects, genres or texts, linguistic functions and situations, linguistic theories, and linguistic competency at the A1 level of the CEFR (Common European Framework of Reference for Languages). According to Allela (2021), structural elements are stages of learning and descriptors for web-based microlearning [13]. The researcher gathered microlearning descriptors from several sources. It was accomplished through library research. Allela, Carla Torgerson and Sue Iannone, De Gagne et al., Hug & Hug, and Rene & Khan are cited as sources for microlearning descriptors and frameworks [13], [24], [26]–[28]. Furthermore, the existing resources, both coursebooks and web-based, are scrutinised by analysing the incorporation of microlearning descriptors. Furthermore, microlearning descriptors that are not mentioned in the current literature are classified. Following that, the learning activity level that describes microlearning is added to the content. The appropriate Medium Microlearning Objects (MeMOs) are subsequently created depending on the present curriculum's learning objectives. 2) Importing the material scripts digitally into the web-based 3) Designing microlearning activities based on language skills for higher student levels to illustrate in the English proficiency course.

The fourth phase, the evaluation phase, is intended to finalise the design of microlearning-based English activities and infused web-based activities for higher education. In this phase, the preliminary product would be evaluated by the experts. Then, the feedback was used to revise the preliminary product. In order to gain more feedback, the preliminary product was tested to a small group of target audience. Finally, the preliminary product would be revised based on the feedback in the evaluation phase.

The following is Fig. 2 as one of the illustrations of designing a web-based microlearning script in the English proficiency classroom and implementing it as Micro-Learning Object Materials (MLOM), such as in Unit 3, which consists of the identity consisting of topic and context, learning outcomes, and MLOM. Each MLOM is broken down into MLOM 3-1, which consists of skill reading-viewing, micro- and macro-skill reading-viewing, and CEFR level. The columns of the table include structural elements, instructional methods, microlearning object media, microlearning descriptors, critical thinking skills descriptors, and script codes.


Unit 2					
Topic & Context	Short Functional Text of Notice, Caution and Warning				
Learning Outcomes	Students will be able to identify social function and text structure of everyday signs and notices, etc. in public places				
MLOM	MLOM 3-1 – MLOM 3-5				
Skill	Reading – Viewing (ML 5)				
Micro-skill	Processing writing at an efficient rate of speed to suit the purpose				
Macro-skill	Recognizing the communicative functions of written texts, according to form and purpose.				
CEFR Level	A2: Can understand everyday signs and notices, etc. in public places, such as streets, restaurants, railway stations; in workplaces, such as directions, instructions, hazard warnings.				
Structural Elements	Instructional Methods	Microlearning Object Media	Microlearning Descriptors	Critical Thinking Skills Descriptors	Script Codes
Welcome to the lesson	Structured Overview	Video		CTS 1	MLOM 3-1
Awaken Prior Knowledge	Inquiry Drilling	Quiz	ML 1, ML 2, ML 3, ML 4, ML 5, ML 6, ML 7, ML 8, ML 9	CTS 2, CTS 6	MLOM 3-2
Content	Lecture	Infographic		CTS 3	MLOM 3-3
Review Key Points	Questions & Answers	Quiz		CTS 4, CTS 5	MLOM 3-4
Exercise	Inquiry	Quiz		CTS 5, CTS 8, CTS 9	MLOM 3-5
MLOM 3-1					
2 Minutes (ML 2, ML 9)					
Visuals	Scripts	Justifications			
	<p>Video Slide 1: Another Story from Danny</p> <p>Video Slide 2: It was Sunday. Danny and his parents stayed at home. His mom would give him an appreciation by inviting them going to a mall. Mom: Danny, because you've been a good boy, let's go watch a movie. Danny: Really, mom? I'm so happy.</p> <p>Video Slide 3: Dad: Let's go. You need to get prepared.</p> <p>Video Slide 4: The family Danny shared some games with his sister. He does not know what they mean.</p> <p>Video Slide 5: At the movie theater, he also found some signs.</p> <p>Video Slide 6: While watching a movie, they had heard at the small food court. Danny also found some signs.</p> <p>Video Slide 7: At home, he read his about what he has seen. Mom explained that they saw various notices, cautions and warnings.</p>	<p>The students can identify and clearly information from the short video shown (CTS 1).</p>			

Fig. 2. Designing Web-based Script of Microlearning in the English Proficiency Classroom

4. Conclusion

The results of this study showed that, in designing the microlearning activities, the procedure of designing the English microlearning activities web-based for higher education exceeded some stages. Firstly, the descriptors of microlearning were not found to be the core considerations for designing microlearning activities [13], [24], [26]–[29]. By considering the CEFR elements (B1), the structural elements of materials, and the instructional method for microlearning object materials with suitable microlearning object media, 4 chapters (chapter 1: Excuse me, can I have your attention, please) For the skills of listening and speaking (Chapter 2: Congratulations for the skill of reading and writing; Chapter 3: No food and drinks; and Chapter 4: There is an apple), in the first semester of English, learning activities were created, totaling 35 Microlearning Object Materials (MLOMs). The MLOMs were put together on a website. Although this study has given insights into microlearning activities that are web-based as a student’s preference in the English Proficiency Classroom, we do not deny the limitations of this study. For example, we explored only a few topics in designing English learning activities. In future research, exploring more topics and levels of students with different teaching contexts might broaden the elucidation of microlearning activities with web-based implementation in classrooms. Future research may explore another platform or MLOMs in the classroom.

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