Revisiting Effective Language Learning Environments for Learners in the Digital Era: A Literature Review

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Abstract

The purpose of this article is to offer a narrative review of research on effective language learning environments for learners in the digital era. To do this, a search strategy was employed to retrieve both conceptual analyses and empirical studies, initially including whether published as journal articles or book chapters. The collected data were compared conceptually, analyzed, synthesized, paraphrased, and eventually coded into related sub-headings or themes. Subsequently, the researcher reconceptualizes contributing factors to an effective language learning environment for the digital generation. Interrelationship between the language learning environment and learners’ performances is also reviewed. Theoretically, this comprehensive revision will help language teachers and stakeholders have a clear insight into the language learning environment and assist them in taking appropriate actions to create more effective learning conditions for their learners.

Keywords: classroom interactions, learner engagement, language learning environment, individual differences

Introduction

The learning environment has been extensively researched in the research literature from a variety of different perspectives. In one of the original discussions, the learning environment focuses on elements that facilitate the process of learning and teaching through the teacher-learner and learner-learner
interactions in classrooms (Schmuck & Schmuck, 1978). In terms of language learning and teaching, the notions of learning environments have been specified as language learning environments. As proposed by Sağlam and Sali (2013), the foreign language learning environment involves the following aspects: physical (e.g., physical environment of the classroom and language teaching materials); social-psychological (e.g., positive classroom atmosphere, learner attitudes & feelings, or teacher attitudes & feelings); instructional approaches & methods (e.g., instructional approaches, lesson content & delivery, instructional methods & techniques); learner involvement (e.g., learners’ readiness student learning, motivation); parental support; linguistic aspects; and others (e.g., teachers’ physical features, cooperation between school administration and teachers, qualified teachers, learners’ previous learning experiences, or learners’ physical features). From the use of language point of view, the theories of language learning environments have commonly emphasized the use of language by the learners inside and outside classrooms. In the context of second language teaching, Krashen (1976) differentiates the use of active language that happens irregularly in the formal environments (inside classrooms) and the informal environments (outside classrooms) where the active language is regularly used. Furthermore, Benson (2021) views the language learning environment as one in relation to the spatial perspectives, in which the focus is placed on the importance of where language learning takes place.

The development of digital inventions and mobile communication technologies has caused a gradual change from the traditional ways of language learning and teaching. Furthermore, these technologies have remarkably affected language learning environments. As observed by Richards (2015), today’s learners are significantly engaged in the digital platform and expect their language learning experiences to reflect the reality of their daily lives, i.e., in their real-life communication outside the classroom. As a consequence, it is necessary for language education to keep up with these changes. Innovation in both learning and teaching method and environment is required. As we may know, learning spaces directly influence learner motivation which is accepted as an essential contribution to language learning and teaching. As observed by Rogers et al. (1999), even the best technology, curriculum, or assessment will not make a difference to learning if the learners do not pay attention to learning.

It can be said that understanding of the language learning environment might help language teachers and stakeholders (i.e., practitioners, curriculum developers, language-policy makers, or educators) take appropriate actions to create effective learning conditions, especially in the context of foreign language teaching. This has been particularly important in this current period what has come to be termed as the “digital era,” where the speed and breadth of knowledge turnover within the economy and society are increased by technology (Shepherd, 2004). Due to the increasing complexity of social conditions and technological advancements in this digital era, depending on the context, the individual language learning environment may have undergone very little change, or it may have changed a lot. In this review, the researcher revisits the contributing factors to an effective language learning environment and draws on the relationship between the language learning environment and learners’ performance. The main focus of this review is to address the following research questions:

Research Question 1 (RQ1): What drives an effective language learning environment for learners in the digital era?

Research Question 2 (RQ2): Is there any relationship between the language learning environment and learners’ performances?

Review Procedure

To synthesize the related literature on what creates an effective language learning environment for learners in the digital era and evaluate the interrelationship between the language learning environment
and learners’ performances in the present review, a series of research stages for both pre-research (i.e., identifying and analyzing research problems & hypotheses) and research procedure (i.e., data collection and data analysis) was respectively implemented (Figure 1).

For the data collection, the researcher firstly utilized the Search, Appraisal, Synthesis, and Analysis (SALSA) (Grant & Booth, 2009) framework to review relevant literature. Accordingly, the researcher employed a search strategy to retrieve both conceptual analyses and empirical reports that were initially included whether published as journal articles or book chapters. To be more specific, the author searched information with the main keywords, including “language learning environment,” “learner engagement,” “technology in language teaching,” “classroom interactions,” and “individual differences” via databases including Web of Science, ERIC, ProQuest, and Google Scholar. Respectively, the collected empirical reports, reviews, or book chapters in relation to the various aspects of the language learning environment and learner’s performances were compared conceptually, analyzed,

![Figure 1](image.png)  
*Figure 1 The review procedure.*
synthesized, and paraphrased (categorical-content methods – Lieblieh et al., 1998). Eventually, the researcher coded the data into related sub-headings or themes (Table 1).

**Findings**

After the search database process, the researcher selected a total of 38 documents, including empirical reports, reviews, and book chapters in relation to the various aspects of the language learning environment and learner’s performances (see Table 2).

**Table 1 Examples of the Coding Procedure**

<table>
<thead>
<tr>
<th>Headings</th>
<th>Example Coded items</th>
</tr>
</thead>
</table>
| **Integrating technology in language classrooms** | [“it is very important to create an effective learning environment by integrating digital resources”] – Kawaguchi (2021)  
[“new technologies are providing the learners with language-targeted environments”] – Benson (2011) |
| **Respecting the cultural diversity and individual differences** | [“the learners are from varied socio-cultural and linguistic background”] – Benson (2004)  
[“the degree of learner autonomy, learning styles, the student’s age, language learning aptitude, the role of motivation, identity and affective factors”] – Richards (2015) |
| **Prompting active interactions between the teacher and learners** | [“the learner is allowed to make the critical pedagogical decision, including the skill and knowledge what they want to learn and how they want to learn”] – Nunan (1999) |
| **Prompting active interactions among the learners** | [“attitudes of learners, which depend not only on the teachers but only on classmates, affect motivation and performance in the learning of foreign languages”] – Dörnyei (2002)  
[“learners are more willing to work with others and provide more support and assistance to each other when working in structured groups”] – Gillies (2004) |
| **Maintaining the regular use of target language** | [“teach a language is that learners are exposed to real language use in the classroom”] – Willis & Willis (2007)  
[“teacher talk” is viewed as one very important and powerful way that teachers may help learners use the targeted language as much as possible] – Erlam, Philp, & Feick, (2021) |
| **Relationship between the language learning environment and learner engagement** | [“motivational strategies instruction proved to be beneficial for improving the experimental group students’ tasks performance and facilitated their tasks engagement as well”] – Hasannejad, Zoghi, & Asl (2017)  
[“learners with learning motivation and interests in the learning environment can improve their cognitive and emotional performances, thereby they can get the better academic achievement”] – Müller & Louw (2004) |
Contributing factors to an effective language learning environment for the digital generations

As discussed briefly in the Introduction, an effective language learning environment contributes to the success of the teaching-learning process. Schmuck and Schmuck (1978) argued that a positive classroom climate is considered the place in which the learners expect to do their intellectual best, work and develop together in the group, maximize individual differences, and have active interactions with both the teacher and other learners for getting better academic achievement. To create an effective learning environment for language learning and teaching in the digital era, it is essential to (1) integrate technology in language classrooms; (2) respect the diversity and individual differences; (3) prompt active interactions between the teacher and learners; (4) prompt active interactions among the learners, (5) maintain the regular use of target language. It should be noted that these elements have interrelationships (Figure 2). To prompt active interactions among the learners, for example, it is important to respect the diversity and individual differences and conversely.

Table 2  Selected Research Documents Corresponding to the Keywords

<table>
<thead>
<tr>
<th>Keywords</th>
<th>The number of selected research documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>language learning environment</td>
<td>13</td>
</tr>
<tr>
<td>learner engagement</td>
<td>05</td>
</tr>
<tr>
<td>technology in language teaching</td>
<td>09</td>
</tr>
<tr>
<td>classroom interactions</td>
<td>05</td>
</tr>
<tr>
<td>individual differences</td>
<td>06</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
</tr>
</tbody>
</table>

Synthesizing the Searched Materials

As discussed briefly in the Introduction, an effective language learning environment contributes to the success of the teaching-learning process. Schmuck and Schmuck (1978) argued that a positive classroom climate is considered the place in which the learners expect to do their intellectual best, work and develop together in the group, maximize individual differences, and have active interactions with both the teacher and other learners for getting better academic achievement. To create an effective learning environment for language learning and teaching in the digital era, it is essential to (1) integrate technology in language classrooms; (2) respect the diversity and individual differences; (3) prompt active interactions between the teacher and learners; (4) prompt active interactions among the learners, (5) maintain the regular use of target language. It should be noted that these elements have interrelationships (Figure 2). To prompt active interactions among the learners, for example, it is important to respect the diversity and individual differences and conversely.

Figure 2  Contributing factors to an effective language learning environment.
Integrating technology in language classrooms

In the context of learning and teaching today, technology extends and changes the breadth and depth of exposure that learners can have with practical targeted-language opportunities beyond classrooms through the internet and social media (Benson, 2011; Chapelle, 2009). Learners therefore can entirely immerse themselves in interactive events in which they learn a language at any time or place with high-speed Internet connections. To create an effective learning environment for the learners, consequently, the use of digital resources is very important (Kawaguchi, 2021). Concurrently, efficient combinations between the use of technology and appropriate teaching methods are also becoming necessary.

In line with the discussion, blending face-to-face (F2F) and online activities and experiences has been widely examined as an effective approach to language education (Stein & Graham, 2014; Sharma, 2010). Over the past decades, there have been numerous variants of blended learning (BL) modes, combining conventional instruction and integration of computer-assisted language learning (CALL) or mobile-assisted language learning (MALL). Putting BL into practice, for instance, Sharma (2010) suggests an approach that teachers can provide learners with an editable website for collaborative activities and access to digital materials for classroom work. Despite unavoidable problems, the most outstanding effectiveness of BL is that it seems to make learners engage more actively in their learning, a phenomenon that has been seen particularly in language classrooms (Grgurović, 2013), where learners are more engaged in classroom activities, and the teacher is able to provide individual feedback and instruction more conveniently when compared to the F2F classroom.

Respecting the diversity and individual differences

Due to the diversity of learners and individual differences, classroom learning environments are complex. As mentioned by Benson (2004), diversity is perhaps most apparent in classrooms where the learners are from various backgrounds of socio-cultures and linguistics. In another viewpoint, “diversity has many facets and is reflected in such areas as the degree of learner autonomy, learning styles, the student’s age, language learning aptitude, the role of motivation, identity and affective factors” (Richards, 2015, p.136). In terms of gender-based diversity, there have been differences in learning styles and classroom behaviors between males and females (Armstrong, 2009; Sax, 2005), especially in language learning. As suggested by Saidin and Brahim (2010), females speak words out loud as they learn, whereas males often work silently during the learning process. Furthermore, Müller and Louw (2004) conclude that there are significant differences in self-determined motivations between males and females, with females scoring remarkably higher than males. Understanding the strategies employed by males and females enables the teacher to effectively instruct learners to monitor their comprehension and learning processes better (Engin & Ortaçtepe, 2019). Consequently, the teacher should be more sensitive in designing learning activities to facilitate increases in satisfaction from both males and females in classrooms, which might make them more engaged in learning.

If teachers are able to understand the individual differences of the learners in their classrooms, they will be able to appropriately develop materials, change their teaching styles to suit their learners, adopt new instructional strategies, and give feedback taking these differences into consideration (Griffiths & Soruç, 2020). Similarly, the process of learning and teaching has been affected by learning differences, individualizing learning processes and taking these learning differences into the center of learning (Özerem & Akkoyunlu, 2015). In response to the individual differences and diversity, learning activities should be designed to fit a variety of learning strategies from the learners. As defined by Oxford (1990), learning strategies refer to “specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed and more transferable to new situations” (p. 8), and an ideal language learning environment would include providing learners with appropriate strategies using the available technologies.
Prompting active interactions between the teacher and learners

It is true that active interactions between the teacher and learners contribute to the success of learning and teaching. To provide appealing learning environments, teachers should flexibly transform their roles in language classrooms. Relying on the particular contexts of classrooms, the teacher could be a friend, instructor, team leader, or even an observer. Based on the real-life observations of learner behaviors, for example, the English teacher as an observer can appropriately change their teaching techniques to encourage learners to actively participate in the lesson. In other words, the teacher’s ability can provide learners with effective learning time and engage all learners in active learning processes. More importantly, the learning-teaching process should be remained as a two-way interaction between the teacher and learners, in which both the teacher and learners are on the journey to acquire knowledge, and learning is centered on the process of language education. As commented by Nunan (1999), the learner should be allowed to make critical pedagogical decisions, including about what they want to learn and how to do it. In other words, learners need to be more active in their learning.

Prompting active interactions among the learners

Along with the changes in society in modern life, it is necessary to have an understanding of learners’ behaviors and how to apply this to classroom learning, especially in language learning classrooms which require active interactions and personal collaboration between the learners. Dörnyei (2002) claims that the learners’ behaviors and attitudes that depend not only on the teachers but only on classmates have effects on their motivation and performance in the learning of foreign languages. Consequently, learners need to be exposed to a learning environment that enables them to make positive relationships with others. In this case, the increase in cooperative learning in language classrooms is believed as an effective solution. Rimmerman (1996, as cited in Sachs et al., 2003) defines cooperative learning as a group of three or four learners working together for a common purpose to complete a task, and it is expected that learners will help each to other succeed academically.

A review of research literature has shown evidence of the effectiveness of group working in language classrooms. Regarding the increase of active interactions among the learners, Gillies (2004) concludes that learners are more willing to work with others and provide more support and assistance to each other when working in structured groups. In terms of language learning and teaching, working in groups provides learners with more opportunities to practice the target language (Richards, 2006). As proposed by Webb (1982), learner-learner interactions in groups extend the learners’ talking time. In addition, interactions in groups help learners to gain the appropriate comments, which enables them to identify common errors in grammar and raise awareness of self-correction (Alfares, 2017).

Maintaining the purposeful use of the target language

The most effective way to teach a language is to expose learners to real language use in the classroom (Willis & Willis, 2007). In classrooms of foreign languages, “teacher talk” is viewed as a great way that teachers may help learners practice the target language as much as possible (Erlam et al., 2021). To purposefully practice language inside the classroom, it is essential to use interactive tasks, “which are tasks for which the informational goal can only be completed by interacting with other people” (Leeser & White, 2016, p. 7). In another words, learners need to use language as a means of meaningful interactions (Bygate et al., 2022). As a result of this, teachers should creatively and flexibly design learning activities or tasks that require learners to practice language in the classroom.

Additionally, the high-quality interaction with target language speakers is considered a contribution to the success of language acquisition (Isabelli-Garcia & Isabelli, 2020). In the context of foreign
languages, however, learners have fewer opportunities to purposefully interact with target language speakers. Fortunately, many studies have reviewed that technology provides learners with more opportunities to regularly practice the language. To illustrate this, much of the work on computer-mediated communication (CMC) and its potential for facilitating second language development has focused on learner-learner or learner-native speaker interaction in asynchronous and synchronous environments (Smith, 2016). One of the most widely used forms of synchronous CMC is telecollaboration, in which such projects use online communication tools to bring together language learners in different countries (or in some cases from within the same country) for the development of collaborative project work and intercultural exchange (O’Dowd, 2018).

**The interrelationship between the language learning environment and learners’ performances**

The collected previous studies highlight that the language learning environment has correlations with the learner’s performances, including learning motivations and interests, engagement, and language achievements. To specifically explain, classroom environments impact some aspects of the learners, including participation, self-reported engagement, and task completion (Anderson et al., 2004). Similarly, a toddler’s language learning environment (i.e., responsive staff, extended talk, and facilitating conversations) promotes learners’ vocabulary development (Hansen & Broekhuizen, 2021). In addition, learners with learning motivation and interests in the learning environment can improve their cognitive and emotional performances, thereby they can get the better academic achievement (Müller & Louw, 2004). On the contrary, Aubrey et al. (2020) suggest that learners with shortages of social cohesion and motivations keep silent and disengage in learning tasks and activities. According to Shernoff et al. (2016), the learning environment is strongly associated with learner engagement.

With regards to the discussion, learning activities or tasks in the classroom positively influence learners’ motivation and interests (Hamer, 2015). In a 2017 study, Hasannejad et al. indicated that motivational strategies instruction improved learners’ performance and facilitated their engagement in assigned tasks. Subsequently, Sulis and Philp (2021) posited that once the gap between class activities and learners’ interests and backgrounds is fulfilled and teachers provide encouragement, learners exhibit higher involvement and enjoyment in learning. Thus, L2 learner engagement can facilitate increases in satisfaction in a synchronous remotely instructed learning environment (Ji et al., 2022).

The review makes it possible to explore the interrelationship between an effective language learning environment and learner engagement, coupled with learning motivation and interests in a complex meta-system that contributes to the learners’ language achievement (Figure 3).

![Figure 3 The impacts of language learning environment on the learners’ performances.](image)
Discussion from the Reviewed Literature

Along with the continually increasing complexity of social conditions, it is possible to state that the technological advancements have made enormous transformations in language education. Particularly, spaces of learning and teaching are gradually broadened, and the teacher is no longer considered the only referenced resources. Based on increased digital learning resources available beyond the classroom, learners are more active in choosing the appropriateness to personalize language learning environments (Reinders, 2014). Similarly, the process of learning and teaching not only depends on what happens in traditional classrooms but technology makes it possible to also anywhere and anytime through Internet-based technologies (Brandl, 2002). In the present time, for example, people from all over the world conveniently join virtual communities using Zalo, Facebook, or What Apps to discuss a wide variety of different subjects. Ideally, this might also provide the learners with great opportunities for regular practices of language beyond classrooms. According to Blattner and Fiori (2013), learners can develop multiliteracy and socio-pragmatic competence through a linguistic analysis of posts on Facebook groups, focusing on greetings, leave-takings, and vocabulary selection.

Indeed, it seems to be that the conventional aspects of the language learning environment (i.e., instructional approaches or materials, or spaces for learning) have changed in the digital era. Furthermore, the intangible elements of the language learning environment surrounding social-psychological aspects have certain transformations. To explain this, learners’ interests and attitudes are more different and complicated in comparison to previous ones, especially for “Generation Z” or so-called “digital natives” (referring to those who were born between 1997 and 2012). As described in most of the research, Generation Z “are less hedonistic, better behaved and lonelier than ever before” (the Economist, 2019). To create an effective language learning environment for these digital natives, along with respecting the diversity and individual differences, prompting active interactions between the teacher and learners, prompting active interactions among the learners, and maintaining the regular use of targeted language, it is essential to integrate advancements of technology in language classrooms, especially in the context of foreign language teaching (Nguyen, 2021). These elements are examined as the cornerstone for learner engagement. As analyzed previously, an effective language learning environment which facilitates learner engagement assisted by other forms of supports can combine into a complex meta-system that constructively contributes to the achievements of language learning and teaching.

Conclusion

The primary purpose of this article was to clarify what drives an effective language learning environment and its impact on digital era learners’ second language performance, including learning motivation and interests, engagement, and language achievement. An effective language learning environment, should include the following five constructive elements: (1) integrating technology in language classrooms; (2) respecting diversity and individual differences; (3) prompting active interactions between the teacher and learners; (4) prompting active interactions among the learners, (5) maintaining the purposeful regular use of the target language. In addition, the interrelationship between the language learning environment and learners’ performance has previously been presented in both theoretical studies and pedagogical practices. Thus, language teachers and stakeholders (i.e., practitioners, curriculum developers, language-policy makers, and educators) should take this into account to be able to take appropriate action to create more effective learning conditions for their learners.
References


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