Developing an Affordance-Rich Curriculum to Enhance English Reading Proficiency Among Chinese College Students Through Blended Learning

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Abstract

Affordances, defined as "potential opportunities" enabling learners to engage in goal-directed actions, serve as a pivotal concept in curriculum design. This study explores the implementation of an affordance-rich curriculum, developed based on affordance theory and delivered through a blended learning approach, to improve the English reading proficiency of Chinese college students. A quasi-experimental design was employed, involving 106 non-English major undergraduates from a Chinese vocational university, with 53 students assigned to an experimental class (EC) and 53 to a control class (CC). Over 12 weeks, the EC received instruction through an affordance-rich curriculum, which systematically integrated linguistic, social, and technological affordances, while the CC underwent conventional lecture-based teaching. Pre- and post-test assessments of reading proficiency were administered to both groups. Statistical analyses revealed significant improvements in the EC's reading performance, demonstrating the efficacy of the affordance-rich curriculum in fostering reading proficiency. These findings underscore the potential of integrating affordance theory within blended learning frameworks to address challenges in English language acquisition in non-native contexts.

Keywords: affordance theory, blended learning, English reading proficiency, curriculum development, quasi-experimental design

1. Introduction

With the progress of scientific advancement, the conventional teaching of English as a foreign language (EFL) has inevitably been replaced by new teaching modes with the assistance of computers or mobile devices. According to the *Guidelines on College English Teaching* issued by the Ministry of Education of China and published by Higher Education Press in 2020, universities are encouraged to effectively utilize information technology to the greatest extent, thereby creating a good environment for teaching and learning that is diversified and open, building various online/offline and mixed-type quality courses, adopting a hybrid teaching approach to shift students from passive to active learners, and ultimately enhancing their learning outcomes (Shen & Yang, 2021).

Since nowadays the academic circle views educational interventions as interactions between students and learning environments rather than a matter of merely inputs and outputs (Kordt, 2016), at the beginning of this century, Tudor (2001) introduced the concept of educational ecology to the field of English language teaching in higher education institutions. Some scholars, such as Van Lier (2000, 2004) and McNeil (2014), believed that second language learning research should also focus on the socio-cultural environment in addition to linguistic input. In their opinions, learning a language needs to not only understand the natural resources but also grasp the opportunities to utilize the resources, interact with other organisms, and act accordingly. Thus, the affordance theory appears, which emphasizes the interaction between learners, the environment and language.

The affordance theory suggests that active learners form relationships with their environment and engage in interactions within it. In language learning, affordances emerge through active participation and usage, creating

subsequent learning opportunities (Van Lier, 2004). This concept appeals to researchers because it views language learning as a dynamic procedure that requires students to actively engage in the learning environment, rather than as a solitary activity governed by the simple causality of input and output. Learners are encouraged to interact with others to identify and utilize affordances available in a given context (Thoms, 2014).

Van Lier (2004) described affordances as "potential opportunities" that allow learners to take actions toward achieving specific goals. These opportunities, whether naturally occurring or intentionally created, can be used for learning when learners recognize them. Consequently, it is both possible and practical for teachers and educators to develop an affordance-rich English curriculum to improve students' English proficiency.

Previous research on affordance theory in language learning typically centers on the ecological approach to second language acquisition and teaching, primarily exploring the theoretical foundations of this viewpoint. The concept of affordance has been applied specifically within the context of second language literature classrooms in some studies (Anderson, 2015; Aronin & Singleton, 2010; Bower, 2008; John & Sutherland, 2005; Kono, 2009; Kordt, 2016). The empirical studies are also grounded in observing existing classrooms and exploring, through observations and interviews, how affordances emerge, what kind of affordances emerge and how teachers or students perceive them in different classroom settings (Ahn, 2016; Alsughayer & Alsultan, 2023; Bahari & Gholami, 2023; Chen, 2023; Dey-Plissonneau, 2017; Jin, 2017; Jiang & Zhang, 2019; Liu & Chao, 2017; Muthmainnah et al., 2023; Saqlain, 2023; Song & Ma, 2021; Thoms & Poole, 2017). There is a shortage in the empirical studies of constructing an affordance-rich curriculum deliberately by teachers to enhance students' English reading proficiency in the classroom.

This study aims to develop an affordance-rich English curriculum for Chinese college students to improve their English reading proficiency through a blended learning approach. Research topics for this study are as follows:

(a) What constitutes an affordance-rich English curriculum via a blended approach?

(b) Can Chinese college students' English reading proficiency be effectively improved after teaching the affordance-rich English curriculum?

The study is a new attempt to deliberately integrate a variety of affordances into the English curriculum design to enhance college students' English reading proficiency. It is expected that this study can offer teachers and educators a new perspective in the creation of an ecological learning environment.

2. Literature review

2.1 Concept and Emergence of Affordances

American ecological psychologist Gibson coined the term "affordance" from the verb "afford" to describe the mutually interactive relation between an organism and its environment (Gibson, 1979). A decade later, Norman (1988) brought the concept of affordance into the field of human-computer interaction, particularly in product design. In the realm of language learning, Van Lier (2004) described affordances as "potential opportunities" that allow learners to take actions toward achieving specific goals. These opportunities, whether naturally occurring or intentionally created, can be utilized for learning when recognized by learners. They provide students with the means to engage in various planned, interactive, and collaborative tasks, aiming to use the language within specific real-life contexts.

Aronin and Singleton (2012) explained that affordances emerge from the interactions between language users, the environment, and the language itself. When language users come across learning resources and interactive opportunities offered by the environment, they interpret these elements, participate in relevant language learning activities, and convert them into affordances. In essence, affordance is not an inherent quality of either the environment or the individual. Instead, it emerges from their interactions (Kordt, 2016).

Ecological affordance theory defines "affordance" as the natural and dynamically adaptive relationship between learners and their learning environment. This concept reflects the holistic interaction and connection between learners and the environment in which they learn.

2.2 Linguistic, Social and Technological Affordances

Different affordances arise in various teaching contexts and environments. Darhower (2008) defined linguistic affordance as any discursive action that offers linguistic information to a learner or aims to enhance a learner's awareness of particular language structures or vocabulary meanings. Thoms and Poole (2017) introduced the concept of social affordance, which involves any discursive action that provides encouragement, shares an opinion about

another's comment, or makes a remark that is not directly related to the text being discussed. Qin and Wei (2021) defined technological affordance as the range of potential actions facilitated by technology in language learning and the possible interactions between learners and a technology-enhanced learning environment. In this study, linguistic, social, and technological affordances were intentionally incorporated into the design of the English curriculum.

2.3 Integrating Affordances into Blended Learning

Blended learning and affordance theory are closely interconnected within the context of education and instructional design. Blended learning is a pedagogical approach that integrates the conventional in-person teaching with the elements of online learning (Albiladi & Alshareef, 2019), such as digital resources, virtual discussions, and interactive activities, thus providing technological and social affordances. As blended learning leverages both physical and digital environments to provide diverse learning opportunities (Bouilheres et al., 2020; Fernandez Sesma, 2020), it means blended learning can offer students more affordances than the traditional teacher-centered learning approach. Different modes of teaching and resources offer various affordances for learners (Xu, 2022; Park, 2021; Song & Ma, 2021; Lai et al., 2007; Zou & Wang, 2019). For instance, in a blended learning setting, students can access online materials, engage in interactive simulations, and participate in virtual discussions. These affordances promote active engagement and enable learners to interact with content in different ways.

2.3.1 Cultivating social affordances through collaboration

Collaborative activities within blended learning environments promote social affordance, facilitating peer interaction and community building. Group cooperation, multimedia presentations, and social media platforms like WeChat foster collaborative learning experiences, nurturing a supportive and engaging atmosphere. By working in diverse groups and assuming different roles, learners enhance their sense of agency and responsibility, contributing to their overall learning experience (Apple & Kikuchi, 2007). Affordance theory emphasizes the significance of interactions between individuals and their environment. Blended learning environments provide opportunities for learners to get in touch with content, peers, and instructors, fostering these interactive relationships.

Group cooperation has proved to be one of the most beneficial and positive activities that students choose among the various activities set by the teacher (Zhu, 2018), which provides students with rich social affordance. In group cooperation, students can support one another, engage in discussions and debates, evaluate their knowledge, and address gaps in their understanding (Gillies, 2016).

2.3.2 Harnessing technology for technological affordance

Blended learning is inseparable from technology. Chinese students' poor performance in English is caused by limited exposure to English in Chinese society (Wang & Crosthwaite, 2021). And technology can help provide students with various authentic English resources.

WeChat, the most popular communication app in China, is increasingly being used in educational settings (Xue & Churchill, 2019). Researchers have identified that it offers a range of educational affordances, including sharing of resources, real-world learning, teamwork, community development, an encouraging environment, assessment and feedback, and administrative assistance for learning (Li et al., 2016; Luo & Yang, 2016; Shi et al., 2017; Sung & Poole, 2017; Tao et al., 2017; Wang et al., 2017; Xu & Peng, 2017). These studies suggest that mobile social media can provide social, technological, and linguistic affordances, thereby enhancing students' learning performance and outcomes.

Multimedia group presentations necessitated active participation from students and were found to be associated with more affordances, as noted by Jiang and Zhang (2019). The results highlight that multimedia group presentations play a significant role in stimulating and molding student agency, as they can perceive social and technological affordances (Nazira, 2020). It's worth noting that perceived affordances can be enhanced through the utilization of technology and learners' agency, as demonstrated by Song and Ma (2020).

2.3.3 Teacher guidance and support in affordance-rich environments

Effective teacher guidance can help students recognize more affordances. Chinese scholar Song (2021) conducted an experimental study, where students used their cell phones for autonomous learning under teacher guidance. The results indicate that when learners are able to perceive and understand abundant learning resources with effective teacher support, a strong ecological affordance can be created. Guiding the utilization of technology in classrooms toward positive outcomes is a responsibility that modern teachers must embrace (Liu & Chao, 2017). The teacher's role should be more dynamic, encompassing effective resource provision, project oversight, and facilitation of learning to cultivate a dynamic learning environment that engages each student (Yuan, 2022). Recognizing that some

students may not possess strong self-efficacy in English learning tasks, the teacher should assume a more proactive role in overseeing the entire process, which includes conducting weekly progress checks and providing regular reminders to assist students in staying on track.

2.4 Affordances and College Students' English Reading

The studies which relate affordances to English reading mainly focus on the affordances emerging from the potential and practical applications of digital tools in English reading. Specifically, they cover how digital social reading practices (e.g., digital annotation tools and online platforms) can support English language learners and how these tools can impact learners' language comprehension, vocabulary acquisition, and critical thinking development (Solmaz, 2021; Curado Fuentes, 2023; Ramos & Oliveira, 2023; Michelson et al., 2023).

Different from the studies that explore digital reading tools for developing different aspects of reading skills, this study tries to examine the effectiveness of an affordance-rich curriculum, which is integrated with teachers' effective guidance, multimedia group presentation, WeChat, and cooperative group activities, on students' reading proficiency.

3. Methodology

3.1 Research Design

In this study, quantitative research was carried out, which consists of two phases. Phase one focuses on the affordance-rich curriculum development with expert review. A quasi-experiment was designed in the second phase to examine the effectiveness of the curriculum.

3.2 Participants

Utilizing a convenient sampling approach from the administrative class is consistent with the requirements of quasi-experimental research (Andrade, 2021). A total of 106 non-English major undergraduates from two administrative classes at a vocational institution in China joined in the study, with 53 students in the EC and CC, respectively. The participants were aged between 18 and 20, comprising 36 males and 70 females. In the EC, there were 20 male and 33 female students, while the CC had 16 male and 37 female students.

3.3 Experiment

This study adopts a quasi-experimental design, which follows an experimental framework but does not involve the random allocation of participants to different groups (Robson & McCartan, 2017). The teaching material, *21st Century College English Book 1*, was used for first-year non-English major students in a university located in southern China during the 2nd semester of the 2023-2024 academic year. Reading sessions were conducted once or twice a week, with 90 minutes for each session. A standardized English reading test was administered to both groups as a pre-test to ensure the homogeneity of the groups and establish a baseline for comparing the post-test results. The intervention consisted of 16 sessions over three months, with the same instructor teaching both the EC and the CC. After the intervention, the same standardized English reading test was administered as a post-test to evaluate the progress of participants.

As for the EC, the teacher provided the students with a learning guide plan before the class began. The plan consists of two parts, and one is for individual learning, such as recognizing difficult vocabularies and phrases, finding out where they are in the text and identifying their contextual meaning in context, finding out the given difficult long sentences in the text, analyzing the sentence structure in context, explaining their connotation, and translating them into Chinese according to the context. The important words, phrases and sentences in the plan are linguistic affordances provided by teachers. From the viewpoint of educational affordance, granting students access to resources during the pre-class phase allows them to become familiar with vocabularies and concepts, thereby enabling more in-depth and reflective discussions (Dey-Plissonneau & Blin, 2016). Another part is group tasks, such as looking up information to learn sentence patterns, responding to questions about the text, examining its theme and structure, and writing a summary of the text with the given key words. The EC was asked to finish the individual tasks before the class began. During the class, students were asked to finish group tasks and present their learning outcomes. Every member of the group was required to contribute a portion to the presentation. Group members were assigned different tasks in each unit of presentation. Their presentation was followed by a question-and-answer session with the teacher and students from other groups. The evaluation consists of student self-evaluation and peer evaluation for the presentation.

The affordance-rich English curriculum for the EC is student-centered, while the curriculum for the CC is traditional lecture-based.

3.4 Data Collection

According to the research design, quantitative data was collected through pre- and post-tests. The pre-test of English reading was conducted in both groups at the beginning of the semester. After a 12-week teaching intervention of the affordance-rich curriculum in the EC and the lecture-based curriculum in the CC, the post-test on English reading was conducted in both classes. The test scores were collected after the pre- and post-tests and the result was analyzed in the 13th week.

3.5 Data Analysis

SPSS was used to conduct data analysis, including an independent samples t-test (ind t-test), paired samples t-test (paired t-test), and analysis of covariance (ANCOVA) in the main study. The ind t-test was conducted to compare the Key English Test (KET) reading scores of the two classes in the pre-test, analyzing the results to identify any differences in reading proficiency between both classes. A paired t-test was then applied to assess the reading proficiency of students in both classes after the teaching intervention. This test aimed to determine whether the CC and the EC show significant improvements after their respective teaching interventions compared to their pre-test results. Following the comparison of pre- and post-test results within each class, a one-way ANCOVA was performed to determine the statistical variations in the proficiency of English reading between the two classes (Chen & Chang, 2021).

4. Results

The reading comprehension section of the KET was administered to both the CC and the EC as a pre-test to assess the initial homogeneity of their reading proficiency. An ind t-test was conducted to determine whether there is an obvious difference in the mean scores between the two classes (Xu et al., 2017). The means and standard deviations (SDs) for both the EC and the CC are presented in Table 1 as part of the results from the ind t-test analysis.

Table 1. Result of the Pre-Test on Reading Proficiency

Variable	Class	*n.*	*Mean*	*SD*	*F*	*Sig.*	*t*	*p*
Reading	EC	53	96.79	15.905	.025	.874	.110	.913
	CC	53	96.45	16.027				

Note: *n* indicates the number.

Results of the ind t-test showed that the mean reading scores for EC and CC were 96.79 and 96.45, with SDs being 15.905 and 16.027, respectively. The p-value was .913 (p > .05), indicating no significant difference in reading proficiency between the EC and the CC. This finding confirms that the two groups were homogeneous in their reading proficiency at the outset, both at the A1 level, before the intervention began.

A paired t-test was applied to determine whether there is an obvious difference between the means of paired observations. It is particularly useful in research settings where the impact of an intervention or treatment is assessed by comparing participants' performance before and after the intervention, while accounting for individual differences within the same group. In this study, the increases in reading proficiency of the EC and the CC were assessed by using the paired t-test.

Results of the paired t-test for students' reading proficiency are shown in Table 2. As for EC, the result shows that students' reading proficiency greatly increased compared to the pre-test. The mean of reading increased from 96.79 (SD=15.905) in the pre-test to 105.32 (SD=15.482) in the post-test, indicating a significant increase in the post-test score of reading (*t*=6.544, *p*=.000 <.001). The results indicate that after the affordance-rich curriculum, the EC made great improvement in reading proficiency.

Table 2. Result of the Pre- and Post-Tests on Reading Proficiency

Group	Variable	Test	*Mean*	*SD*	*t*	*p*
EC (*n*=53)	Reading	Pre-test	96.79	15.905	6.544	.000
		Post-test	105.32	15.482		
CC (*n*=53)	Reading	Pre-test	96.45	16.027	1.588	.118
		Post-test	98.49	15.664		

In CC, the mean of students' reading scores increased from 96.45 (SD=16.027) to 98.49 (SD=15.664), with a t-value of 1.588 (p=.118 >.05), indicating there is no significant improvement in students' reading proficiency.

ANCOVA is a statistical method for comparing the means of a dependent variable across different groups while controlling for the influence of one or more continuous variables, referred to as covariates. In this study, the post-test scores were independent variables, the pre-test scores were dependent variables, while classes and scores of pre-tests were covariates. Prior to conducting the one-way ANCOVA, it is imperative to assess whether the regression coefficient within each class adheres to the assumption of homogeneity, as stipulated by the ANCOVA.

Before conducting ANCOVA in this study, the homogeneity of regression coefficients was assessed to examine whether the influence of pre-tests on the post-test English reading scores varies by class. The reading pre-test scores were considered independent variables, and the interactions between the pre-test scores and class were tested. The results indicated that the interaction between the reading pre-test scores and classes (F = 0.012, p = 0.914 > 0.05) was not significant. This suggests that, after controlling for the pre-test scores, there was no significant impact of the class on the post-test scores. Thus, it appears that both groups were equally affected by the pre-test scores, supporting the assumption of homogeneity of regression coefficients for both tests within the classes. Consequently, the ANCOVA could proceed. Following the test for homogeneity of regression coefficients, the descriptive analysis of the two classes was conducted and the results are presented in Table 3. The ANCOVA results are listed in Table 4.

Table 3. Descriptive Analysis of Two Classes in the Post-Test

Class	Variable	*M*	*SD*	*n*
EC	Reading	105.32	15.482	53
CC	Reading	98.49	15.664	53
Overall	Reading	101.91	15.874	106

Note: *M* indicates the mean.

Table 3 is a descriptive analysis of the post-test before controlling for the influence of the pre-test and classes. The post-test mean of reading is 105.32 (SD=15.482) for the EC and is 98.49 (SD=15.664) for the CC.

Table 4. Result of One-Way ANCOVA of Reading

Variable	Source	*SS*	*df*	*MS*	*F*	*p*
Reading	Pre-test	1 7043.308	1	1 7043.308	214.618	.000
	Class	1 139.524	1	1 139.524	14.349	.000
	Error	8 179.484	103	79.412		
	Total	26 459.057	105			

Table 4 shows that the reading (F=14.349, p<.001) in classes has a significant difference, indicating the affordance-rich teaching intervention has significantly influenced the outcome of the post-test. The impact of teaching methods on the post-test English reading scores is statistically significant, as the F-value is 14.349, and the p-value is 0.00, which is lower than the significance level (typically set at 0.01). Therefore, the differences in the post-test English reading score between the EC and the CC can be attributed to the different teaching methods.

Then the class performance in the post-test was compared after the teaching intervention, and the results are listed in Table 5. The adjusted mean of the reading test score in the EC is 105.185 (SD=1.224), which is higher than the adjusted mean of 98.627 (SD=1.224) in the CC. The results indicate that the affordance-rich curriculum is more effective in improving students' English reading proficiency than traditional teacher-centered lectures.

Table 5. Adjusted Means of Two Classes

Variable	Group	*Adj.M*	*Adj.SD*	*n*
Reading	EC	105.185	1.224	53
	CC	98.627	1.224	53

Note: *Adj.M* indicates the adjusted mean, and *n* indicates the number.

5. Discussion

One of the purposes of the study is to build a curriculum that provides abundant learning opportunities, enabling learners to perceive various learning possibilities in language materials, social support, and technology, and then take action to utilize these possibilities.

Addressing the first research question of "what constitutes an affordance-rich English curriculum via a blended approach" requires a comprehensive exploration of the key components and characteristics of such a curriculum. An affordance-rich English curriculum via a blended approach integrates conventional in-person teaching with online learning resources and interactive technology to foster a dynamic and stimulating learning environment. The elements constitute such a curriculum, which provides students with ample linguistic, social and technological affordances, includes the following aspects:

(a) Integration of technology: An affordance-rich English curriculum leverages various technological tools and platforms to enhance the learning experience. This includes interactive multimedia resources, educational software applications and communication tools such as WeChat (Shi & Luo, 2016). Integrating technology enables students to engage with course materials in diverse formats and facilitates interactive learning experiences (Anggeraini, 2018). It provides students with plenty of technological affordances.

(b) Interactive learning resources: The curriculum incorporates a broad range of interactive learning resources, e.g., smart boards and superstar platforms, which are designed to promote active engagement and participation. These resources include multimedia presentations, online quizzes and activities. Interactive learning resources provide students with opportunities for hands-on practice, immediate feedback, and personalized learning experiences tailored to their individual needs and preferences (Anggeraini, 2018). Technological, linguistic and social affordances emerge from these interactive learning resources.

(c) Blended learning modalities: An affordance-rich English curriculum embraces a blended learning approach that combines conventional in-person teaching with online learning modalities. This hybrid model provides flexibility and accessibility, enabling students to retrieve course content and engage in educational endeavors both within and beyond the classroom setting (Altay & Altay, 2019). Blended learning modalities may include hybrid courses and asynchronous online learning modules (Bouilheres et al., 2020).

(d) Differentiated instruction: The curriculum incorporates differentiated instruction strategies to address the varied learning styles, preferences, and proficiency levels of students. This approach includes offering options such as self-paced learning, collaborative group projects, personalized assignments, and scaffolded activities. By customizing instruction to align with the distinct needs of each learner, this approach promotes inclusiveness and guarantees so that all students are afforded the chance to achieve success.

(e) Active learning pedagogies: An affordance-rich English curriculum emphasizes active learning pedagogies that encourage students to actively engage with course content, collaborate with peers, and apply critical thinking skills to real-world scenarios. Active learning pedagogies can encompass methods like problem-based learning, project-based learning, peer teaching, and experiential learning. By fostering active participation and inquiry-based learning, these pedagogies promote deeper understanding and retention of course materials.

(f) Formative assessment practices: The curriculum incorporates formative assessment practices to monitor learner advancement, provide prompt feedback, and guide pedagogical decisions. Formative assessments may take various forms, such as quizzes, peer evaluations, self-assessments, and multimedia presentations (Morris et al., 2021). By assessing student learning continuously throughout the curriculum, educators can pinpoint areas for improvement and tailor teaching to address the changing requirements of students.

(g) Collaborative learning communities: An affordance-rich English curriculum fosters collaborative communities where students can exchange with their peers, share ideas, and engage in meaningful discussions. Collaborative learning communities may be facilitated through group discussions, group presentations, peer review activities, and collaborative reading exercises, as designed in the curriculum. By promoting peer-to-peer interaction and social learning, collaborative learning communities boost student engagement and raise a sense of belonging within the learning community. Leaning communities can attract students' participation and motivate them to perform better (Syatriana & Sakkir, 2020). Plenty of social affordances can be provided for students.

Regarding the second research topic, the findings reveal that the affordance-rich English curriculum via blended learning can significantly improve students' English reading proficiency and enable them to make positive changes in learning outcomes. This suggests that the affordance-rich blended learning environment provides a more adaptable and individualized learning trajectory by integrating a variety of affordances, which effectively promotes the learning

outcome of students. The result of the research is in line with the study by Qin et al. (2020).

In the affordance-rich curriculum, the teacher provides students with a learning plan regarding the reading materials, allowing each group to conduct group discussions and collaborate using online resources to complete the tasks outlined. It incorporates targeted reading activities designed to enhance students' English reading proficiency. These activities include reading comprehension exercises, authentic reading materials, group cooperative reading, group discussions and multimedia resources. By giving plenty of reading materials and involving students in meaningful reading tasks, the curriculum helps to develop their vocabularies, comprehension, and critical reading skills, thus increasing their reading proficiency.

The curriculum utilizes interactive multimedia resources to support English reading teaching. These resources include online dictionaries, audio recordings, and video lectures. By providing students with access to multimedia resources, the curriculum enhances the accessibility and engagement of English reading materials, catering to diverse learning preferences and fostering independent learning skills (Ghaniabadi et al., 2016; Satriani, 2019). The findings of this study are in line with the studies by Satriani (2019) and Ismial et al. (2020).

The affordance-rich curriculum incorporates scaffolded learning activities which provide social affordance to support students at different proficiency levels (Jamali Kivi et al., 2021). These activities include pre-reading tasks, vocabulary exercises, guided reading activities, and post-reading discussions. By scaffolding the reading process, the curriculum enables students to develop essential reading strategies, such as predicting, skimming, scanning, and inferencing, while progressively increasing the complexity of reading materials and tasks.

The curriculum integrates formative assessment practices to monitor students' progress in English reading proficiency. These assessments include online quizzes, comprehension questions, and performance tasks. By regularly assessing students' reading comprehension skills and providing timely feedback, the curriculum identifies areas for improvement and guides instructional decision-making to meet students' individual needs. The research by Leenknecht et al. (2021) also indicates that a higher perceived utilization of formative assessment correlates with increased feelings of autonomy and competence, as well as heightened autonomous motivation from students. Thus, formative assessment as social affordance can enhance students' reading proficiency and engagement. The findings of this work are in line with the studies by Ahmadi. et al. (2021) and Sönmez and Cetinkaya (2022).

The affordance-rich curriculum provides opportunities for collaborative reading activities which have social and linguistic affordances, such as peer discussions and group projects (Solmaz, 2021). By fostering peer interaction and collaboration, students can share ideas, exchange perspectives, and support each other's learning, thereby enhancing comprehension, critical thinking, and communication skills.

In summary, an affordance-rich English curriculum delivered through a blended approach incorporates a multitude of components and features designed to enhance the learning experience. By combining technology, interactive learning resources, blended learning models, differentiated teaching, active learning strategies, formative assessment practices, and collaborative learning communities, educators can create a dynamic and immersive learning environment that fosters student engagement and promotes reading proficiency.

6. Recommendations for Future Studies

While the present study has provided valuable insights into the effectiveness of an affordance-rich curriculum through blended learning, several avenues remain open for further research. Future studies could explore the following areas to enhance our understanding of blended learning environments and curriculum design in language education:

(1) Longitudinal Impact: Future research could employ a longitudinal design to track the long-term effects of the affordance-rich curriculum on students' English proficiency. Such studies would provide insights into the sustainability of educational gains and the continued applicability of learned skills in real-world settings.

(2) Broader Demographic: Expanding the study to include students from different academic disciplines and cultural backgrounds could help generalize the findings. Comparing how students across various fields respond to the affordance-rich curriculum might highlight discipline-specific educational needs and opportunities.

(3) Technological Integration: With rapid advancements in educational technology, further studies could investigate the integration of newer digital tools and platforms into the affordance-rich curriculum. Research could focus on the effectiveness of emerging technologies like augmented reality (AR) and virtual reality (VR) in enhancing linguistic, social, and technological affordances.

(4) Teacher Perspectives: Future research could also examine the perspectives and experiences of instructors implementing the affordance-rich curriculum. Understanding the challenges and facilitators from the educators' viewpoint could provide deeper insights into curriculum implementation and the necessary support structures needed for successful adoption.

(5) Comparative Methodologies: Implementing a comparative study that examines the affordance-rich curriculum against other innovative teaching methodologies could further validate the effectiveness of this approach. Such studies could use experimental designs to provide robust evidence supporting specific educational practices.

(6) Skill-Specific Studies: Focusing on specific language skills such as writing, listening, or speaking might yield detailed insights into how different aspects of language proficiency are influenced by affordance-rich environments. This could help in tailoring curriculum components to better support specific skill development.

(7) Feedback Mechanisms: Investigating the role of feedback within the affordance-rich curriculum could enhance understanding of how feedback mechanisms affect student engagement and learning outcomes. Future studies could look into the optimal types and frequencies of feedback that bolster student learning.

(8) Cultural Affordances: Research could also explore how cultural elements within the curriculum influence learning. This includes how cultural references and contexts used in teaching materials affect students' engagement and learning outcomes, particularly in diverse classroom settings.

By addressing these areas, future research can build on the foundational work of this study and continue to push the boundaries of educational innovation in language learning. This will not only improve curriculum designs but also adapt teaching practices to meet the evolving needs of students in a globalized world.

7. Conclusion

This study confirms the effectiveness of an affordance-rich curriculum in enhancing college students' reading proficiency, aligning with the diverse needs of modern learners and contrasting with traditional English teaching methods in universities. By integrating a variety of teaching methods supported by information technology and combining online and offline resources, this curriculum promotes equitable teacher-student interactions and a dynamic learning environment.

The implementation of this curriculum not only improves English reading skills but also fosters critical thinking and communicative competence through collaborative tasks and peer feedback. These activities are crucial in developing students' self-confidence and motivation, further advancing their language proficiency.

Our findings suggest that adopting an affordance-rich, blended learning approach can significantly benefit English language education in Chinese vocational universities. This approach should focus on creating a dynamic environment that supports various learning styles and enhances student engagement.

Overall, this research extends the ecological and affordance theories in language education by demonstrating how well-designed curricular interventions can foster comprehensive language skills development. The study advocates for a holistic pedagogical framework that encourages autonomy, self-regulated learning, and authentic language use, essential for nurturing proficient language users in a global context.

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