

A proposal for blended language learning project focuses on ESL learners

Yifan Pang^{1,a}, Harwati Hashim^{2,b}

¹Faculty of Education, The National University of Malaysia, Malaysia

²Faculty of Education, The National University of Malaysia, Malaysia

^ayifanp94@163.com, ^bharwati@ukm.edu.my

Abstract: The evolving societal landscape and technological advancements have redefined educational demands, leading to notable improvements in teaching methodologies driven by continuous technological evolution. Blended learning, a widely embraced approach, transcends traditional educational boundaries, emphasizing the paramount role of student communication and interaction in an era of extended education beyond physical classrooms. Collaborative learning groups are increasingly integrated into blended teaching, with group formation as a pivotal element. This study draws upon cognitivism, collaborative learning, and social interdependence principles to address issues within group cooperative activities in blended teaching. It leverages the strengths of blended teaching and collaborative learning, designing instructional activities and conducting action research in practical teaching settings. The research methodology unfolds in phases: a literature review explores the current landscape of blended collaborative learning, providing insights into challenges; a theoretical exploration, grounded in educational theory, delves into the design of teaching activities within blended environments; the technical investigation combines collaborative grouping with machine learning to propose innovative grouping strategies; and the action research phase validates findings through specific instructional courses and research subjects.

Keywords: blended learning, language learning, ESL learners, Educational technology, Collaborative learning

1. Context of the design

Technological advancements have the potential to serve as a versatile tool in various fields, including language learning, as suggested by Laurillard (2013). It is noteworthy that a significant connection exists between language learning and technology. The judicious utilization of technology can indeed facilitate and enhance language learning.

In this context, it's important to recognize the strong interplay between language learning and technology. The judicious use of technology, whether in the form of interactive software, online resources, or language learning apps, has the potential to greatly facilitate and enhance the language learning experience. Learners can now access a wealth of digital tools and resources that cater to various aspects of language acquisition, from vocabulary building to pronunciation practice.

Moreover, technology provides learners with the flexibility to engage with language learning materials at their own pace and convenience. The incorporation of multimedia elements, such as videos, audio clips, and interactive exercises, adds depth and engagement to the learning process. Learners can immerse themselves in authentic language contexts, interact with native speakers through online platforms, and receive instant feedback on their language skills.

Language educators are also harnessing the power of technology to design innovative pedagogical approaches that cater to diverse learning styles. Adaptive learning systems, virtual classrooms, and gamified language lessons are just a few examples of how technology is shaping the future of language education.

As the field of language learning continues to evolve in response to technological advancements, it becomes increasingly essential to explore and implement effective strategies that leverage the benefits of these tools. This involves not only the integration of technology into curricula but also the careful design of blended language learning programs that harness the full potential of both traditional and digital teaching methods.

With the right combination of pedagogical design and technology, language learners can experience more interactive, immersive, and effective language acquisition experiences. In this ever-changing landscape, it is crucial for educators and researchers to continue exploring, adapting, and optimizing the use of technology in language learning to meet the evolving needs of learners in the 21st century.

2. Motivation for the design

The motivation behind designing an improved language curriculum for ESL (English as a Second Language) learners in China is rooted in the earnest desire to address the evolving educational needs of this specific group of learners. ESL learners in China face unique challenges, including linguistic, cultural, and pedagogical differences. These challenges necessitate a fresh approach to language education that not only accommodates their diverse backgrounds but also maximizes their learning outcomes.

By selecting the work of Laurillard (2013) as the foundational reference, this paper is driven by the recognition that modern language education must embrace the transformative potential of technology and innovative pedagogical approaches. Laurillard's insights offer a comprehensive framework for reimagining language learning in the digital age.

In China, where English proficiency is increasingly crucial for academic, professional, and global communication, the motivation to design an advanced language curriculum is even more pressing. ESL learners seek to not only acquire linguistic competence but also develop the communicative and cultural skills necessary to thrive in an interconnected world.

The motivation to undertake this endeavor is deeply rooted in the belief that a well-designed language curriculum can be a powerful enabler, providing ESL learners in China with the tools they need to confidently navigate a globalized landscape. It aims to empower them with the language skills required for academic success, career opportunities, and cross-cultural interactions. Furthermore, the aspiration to enhance language education for ESL learners is underpinned by the understanding that their educational experiences have a profound impact on their future prospects and personal growth.

3. Aim and scope

With the objective of advancing blended language learning within the English curriculum for ESL learners in China, this paper will implement pedagogical design theory into practical application. To attain this objective, the paper provides a brief review of the design concepts introduced by Laurillard (2013), primarily emphasizing 'learning through practice' and 'collaborative learning.' Subsequently, specific designs associated with these concepts will be introduced. The assessment of language learning based on the designed framework will be discussed. Finally, the paper concludes by offering suggestions for further research and acknowledging the limitations of the design.

4. Design principles

The design principles related to the concept of 'learning through practice,' based on prior unpublished work (Wang, 2019), encompass three key perspectives. The first perspective involves the mode of learning, which includes authentic and situated learning, as well as experiential learning. The second perspective pertains to the provision of intrinsic and extrinsic feedback from teachers, peers, or assessments. The third perspective focuses on specific types of practices, such as role-play simulations and environmental simulations, which aid learners in connecting acquired concepts or knowledge with practical, real-life contexts. It is believed that learning through application and communication effectively facilitates the transfer of knowledge accumulated by individuals. The integration of technology in language classes offers learners additional resources

for simulated practice. Learning through practice constitutes a fundamental aspect of formal education. As learning methodologies evolve, learners can acquire knowledge through specifically designed curricula, such as projects, experiments, or simulations (Perkins, 1991). Feedback received during these practical experiences enables learners to assess their performance and make necessary revisions.

Furthermore, we introduce another design principle, 'learning through collaboration'. Collaborative learning centers on encouraging students to work together in the learning process, aligning with the educational principles of student-centered and human-oriented development. Cooperative learning primarily draws from constructivist and humanistic learning theories. According to the constructivist theory, meaning and understanding are derived from social interactions (Harasim, 2015). This theory posits that learning is a process in which learners autonomously construct internal mental representations through interaction with their surrounding environment. Knowledge is not merely transmitted by teachers but is instead constructed by learners in the context of their social and cultural backgrounds through interpersonal cooperation, discussions, and related activities. In the humanistic learning theory, it is asserted that rote learning involves only the intellect, lacking emotional engagement and personal significance, resulting in the accumulation of knowledge. On the other hand, meaningful learning drives substantial changes in individual behavior, attitudes, personality, and future decision-making. It represents a form of learning that integrates personal experiences and resonates with each individual.

5. Design in practice

This section outlines the design components of this paper, aligning with the established design principles and categorizing them into two main sections: "Learning Through Practice" and "Learning Through Collaboration."

The first component of the curriculum design involves the incorporation of role-play simulations as in-class activities. Laurillard (2013) emphasized the prevalence of role-play simulations in professional disciplines. In this context, learners engage with scenarios created by instructors, where they must address issues or acquire information based on their understanding of the subject matter. The decision to include role-play simulations as a class activity stems from their capacity to foster learner engagement and bridge the gap between acquired knowledge and its practical application. To achieve this learning goal, instructors must craft scenarios that provide the essential information for learners to develop their dialogues. These resources or materials may take various forms, including visual, audio, or other formats tailored to the specific discipline's context. All materials should be grounded in professional practice or verified as appropriate for teaching by instructors.

A study by Dehaan et al. (2012) presented a four-week language program for Japanese ESL learners that employed an online study management system. Learners assumed roles within strategic interaction scenarios, with their performance assessed by instructors and peers. Observations revealed that learners' language proficiency improved in various aspects, including fluency, syntax, vocabulary, and pragmatics. The activity design was found to enhance learners' confidence in their English speaking abilities and promoted individual and collaborative skills through experiential learning.

Agapiou, Maharg, and Nicol (2010) introduced a common approach to this type of learning activity. In this simulation, learners are tasked with employing the professional knowledge they have acquired to solve problems presented in the scenario. At the outset of the exercise, instructions and references needed for the task are provided through online data sharing. Learners' performances are recorded and uploaded to an online group page, where they receive feedback from peers. Instructors offer feedback based on students' actions and their professional knowledge.

In the pedagogical design for English classes with specific objectives, such as past tense (see Appendix A for the procedure), scenarios are designed to elicit the use of past tense. Prior to the

class, instructors share the fundamental rules regarding past tense online via Microsoft. Teaching materials include videos demonstrating the use of past tense in everyday life, which are shown at the beginning of the class. Following the video presentation, students engage in a five-minute group discussion to share their observations and answer questions related to past tense usage in the video. The subsequent section involves practical exercises in which instructors present learners with scenarios requiring them to assume roles and employ past tense in dialogues. These scenarios not only facilitate the acquisition of grammar knowledge but also enhance pragmatic skills. For instance, learners may need to apologize for missing an important meeting, providing an opportunity to learn how to apologize in English and develop pragmatic competence. Role-play activities are recorded as videos and uploaded to the online group page for further comments. After each group completes its role-play, instructors provide feedback on various aspects, including grammar, fluency, pragmatics, and other relevant considerations.

Feedback from instructors and classmates plays a pivotal role in language learning. Positive feedback can bolster learners' confidence in speaking English and encourage their active participation in classroom activities (BA, 2006). However, Laurillard (2013) pointed out that students may not always appreciate negative feedback provided by others. Instructors should not only offer intrinsic feedback but also provide extrinsic guidance, such as showing students model answers, to enhance learning outcomes.

The second component of the curriculum design centers on the concept of "Learning Through Collaboration." Computer-Supported Collaborative Learning (CSCL) involves using technology to facilitate and support collaborative learning. Barros and Verdejo (2000) posit that effective learning necessitates harnessing the collective power of groups and assigning tasks and shared responsibilities based on collaborative learning principles. The core of supporting role-play activities in CSCL is the collective responsibility of students within collaborative learning groups. Success or failure in role-play activities reflects individual learning accountability in CSCL, and the collaboration of the group influences the ultimate success of collaborative learning. Notably, we have chosen to employ the flipped classroom model to design blended learning and teaching for ESL students. Flipped classroom teaching can cultivate students' innovative thinking, teamwork skills, practical abilities, and provide opportunities for cooperative learning (Roach, 2014). It combines traditional direct ESL classroom teaching with mixed teaching, optimizing class time and empowering students to take the lead.

Drawing from the principles of CSCL, the flipped classroom teaching model comprises three key stages: pre-class preparation by instructors, pre-class collaborative activities, and in-class cooperative activities. During the preparation stage, instructors conduct thorough pre-class preparations (see Appendix B for the procedure). They can create teaching videos or select high-quality videos from the internet. Teaching videos should clearly outline the learning objectives and the content to be taught through cooperative exploration to achieve the most effective teaching outcomes. Instructors also provide appropriate exercises to reinforce students' comprehension and retention of the material covered in the videos. Careful consideration should be given to the number and difficulty of these exercises. According to Pea (2004), instructors must gradually reduce their support and ensure that students prepare each other and analyze how to enhance their performance. Instructors should design carefully calibrated exercises, ensuring that each practice falls within the learners' zone of proximal development. Formative feedback should be provided after each practice to help learners interpret their results and identify areas for improvement. Instructors should have the ability to search for and integrate information, incorporating video, animations, text, and audio content when teaching. They need to select team members based on their understanding of the students, balance the resources within the team, and clarify the responsibilities of each role. During the pre-class collaborative activities stage, instructors and students work together. Instructors assess students' learning status by examining the issues raised in the students' pre-class exercises and collaborative communication, analyze any challenges present, and set appropriate in-class problems. Students can watch the videos together with their group members and complete exercises assigned

by instructors. During the in-class collaborative activities stage, instructors should present students with well-defined collaborative tasks, clear objectives, and personalized guidance. In line with CSCL, the environment emphasizes not only individual thinking but also collective thinking, requiring students to work together. Instructors can use random checks to stimulate learning and guide teamwork, enabling students to develop a knowledge capsule through teamwork. In the process of group collaboration, students learn to communicate, cooperate, and share with their group members. In the post-class collaborative activities stage, instructors should conduct a summary and evaluation of the activities and the knowledge system covered in class. Students should also conduct self-evaluations and peer evaluations to gain insight into their roles within the team.

6. Assessment of learning

Assessment is a critical aspect of the learning process for students. It not only provides feedback to learners about their progress over a certain period but also serves as a pivotal motivator, encouraging them to invest more effort in their education. Even though our proof of concept requires further implementation and our pedagogy design is yet to be put into practice, the assessment methods in our designed blended language learning program are worth discussing in this paper.

Compared to traditional paper-based assessments, the utilization of technology in blended language learning curricula offers a variety of assessment approaches. In the context of role-play simulations, as discussed earlier as a practice activity, assessments are based on individual and group performances. Additionally, comments made on the online group page are taken into consideration. Learners' performance can be evaluated from different angles, encompassing aspects like vocabulary, grammar, fluency, and pragmatics. The primary criterion is whether students successfully addressed the challenges presented in the selected scenarios. Furthermore, students' active engagement in online group discussions forms a significant part of the assessment.

To evaluate the effectiveness of the pedagogy design in collaborative learning, assessments will be employed to compare traditional language classes with blended language learning. The independent variable is the teaching mode based on Computer-Supported Collaborative Learning (CSCL) versus the traditional teaching mode, while the dependent variables encompass learning performance, independent learning capabilities, and students' interest in learning among the two groups of ESL students. One group adopts the CSCL teaching mode, while the other adheres to the traditional teaching mode. After the teaching phase, identical test questions are employed to evaluate the learning performance of both groups and identify any differences. Simultaneously, a questionnaire is administered to investigate role assignments, learning interests, independent learning abilities, cooperative skills, and communication abilities of students using the CSCL model. A comparison and analysis of the two teaching models follows. Collaborative knowledge construction takes place through individual competition, online debates, and cooperation. Instructors guide, manage, and monitor students throughout the entire learning process (Harasim 2017). Guidance primarily involves addressing students' queries, providing resources, and offering solutions.

Management centers on actively supporting group collaboration, fostering strong relationships among group members to facilitate collaborative learning. Monitoring entails assessing students' progress and participation.

7. Suggestions for further development

With additional time and resources, our work can be further enhanced by incorporating 'script instruction,' which can be defined as a framework guiding teachers in designing their class activities (Schwartz, 1999). Following the script, teachers can more easily create suitable activities for

learners and ensure that the study outcomes align with their goals. Dillenboure (2002) asserts that the development of Computer-Supported Collaborative Learning (CSCL) will increasingly focus on achieving a balance between "person-interaction," shared knowledge construction, simulation, task-mediated representation of verbal interaction, CSCL scripts, automated interactive analysis, and effective knowledge sharing within virtual communities. To explore the evolving trends in the CSCL field, it is crucial to analyze the key components of CSCL, thus elucidating the research direction in this field.

Firstly, there is a need to foster learners' collaborative abilities and recognize the impact of individual past collaborative experiences on new collective endeavors. Secondly, research geared towards CSCL scripts should be developed, with the utilization of computer software to support scripted collaborative learning processes. This entails creating specific and more explicit conversational connections between teachers and student groups based on the chosen collaboration mode. Moreover, as Woodruff (1999) defines, a community is "a group of individuals engaged in discourse communication for the purpose of enhancing collaborative knowledge construction." Therefore, it is imperative to promote social research aimed at collaborative learning.

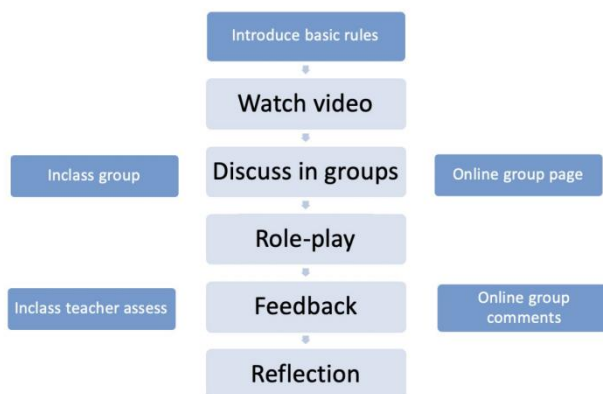
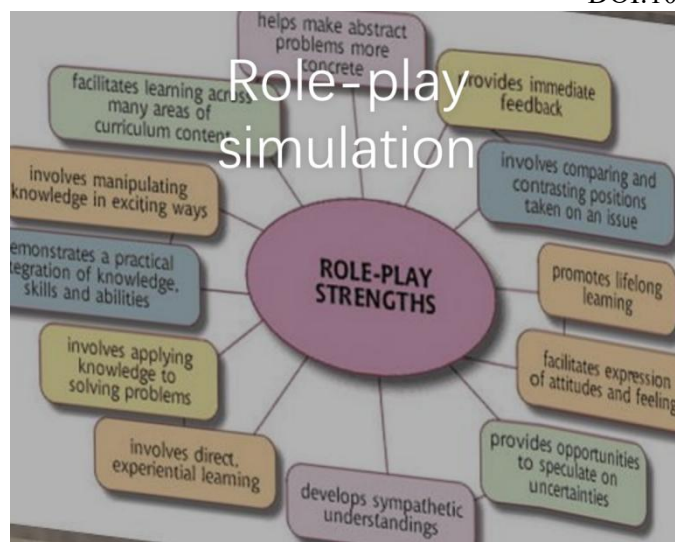
Simultaneously, it is advisable to conduct a survey to gather learners' opinions on various curriculum designs and carefully select the ideal context for implementing the design in real language learning. The detailed procedure for class activities should be measured and adjusted to cater to the learners' specific needs. It is vital to ensure that the target learners possess the means to complete all sections of the course design without facing external constraints, such as economic limitations.

References

- [1] BA, E. (2006). A blended-learning pedagogical model for teaching and learning EFL successfully through an online interactive multimedia environment. *CALICO Journal*, 23(3), 533.
- [2] Barros, B., & Verdejo, M. F. (2000). Analysing student interaction processes in order to improve collaboration. The DEGREE approach. *International Journal of Artificial Intelligence in Education*, 11(3), 221-241.
- [3] Dehaan, J., Johnson, N. H., Yoshimura, N., & Kondo, T. (2012). Wiki and digital video use in strategic interaction-based experiential EFL learning. *CALICO Journal*, 29(2), 249-268.
- [4] Dillenbourg, P. (2002). Over-scripting CSCL: The risks of blending collaborative learning with instructional design.
- [5] Harasim, L. (2015). Collaborative Learning Theory and Practice: the Missing Link in Effective Online Education. *Distance Education in China*, (8), 2.
- [6] Harasim, L. (2017). *Learning theory and online technologies*. Routledge.
- [7] Laurillard, D. (2013). *Teaching as a design science: Building pedagogical patterns for learning and technology*. Routledge.
- [8] Perkins, D. (1991). Educating for insight. *Educational Leadership*, 49, 4-8.
- [9] Rilling, S. (2005). Connecting CALL theory and practice in preservice teacher education and beyond: Processes and products. *CALICO Journal*, 22(2), 213.
- [10] Roach, T. (2014). Student perceptions toward flipped learning: New methods to increase interaction and active learning in economics. *International Review of Economics Education*, 17, 74-84.
- [11] Schwartz, D. L. (1999). The productive agency that drives collaborative learning. *Collaborative learning: Cognitive and computational approaches*, 197-218.
- [12] Woodruff, E. (1999). Concerning the cohesive nature of CSCL communities. In *Proceedings of the 1999 conference on Computer support for collaborative learning*. International Society of the Learning Sciences, 81.

Appendix A

The procedure of the role play simulation



Appendix B

The procedure of the flipped classroom teaching mode

