

# Constructing task-oriented blended teaching mode of college English course from the perspective of learning space: An empirical study

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**Abstract:** *The ongoing advancement of network technology constitutes technological foundations for educational innovations and the expanded access to learning spaces, which paves a new way for blended learning. In view of the existing problems and challenges in college English teaching in China, this study proposed a task-oriented blended teaching (TOBT) mode of college English course on the basis of summarizing the research background of learning space, task-oriented teaching and blended teaching. The empirical study demonstrated that this TOBT mode generated effective teaching outcomes and triggered students' positive learning behaviors. The research findings contributed to extending our understanding on blended teaching mode and providing some enlightenment to educators for constructing a technology-initiated language teaching.*

**Keywords—**learning space; task-oriented teaching; blended teaching and learning; teaching reform of college English

## 1. INTRODUCTION

With the ongoing advancement of network technology, new learning approaches such as online learning and e-learning have expanded learning spaces and venues, thus going beyond the boundaries of traditional classroom-based teaching and learning (Lai et al., 2016). Informal learning has become a new way of learning, which provides more flexibility of knowledge acquisition and enables learners to conduct self-directed learning on the basis of their personal interests and needs. Realistically, the integration of the traditional classroom learning and the network-based informal learning has been accessible, thereby generating the synthetical research on the combination of the real and virtual learning spaces. Accordingly, blended learning research have emerged as a magnet (McCutcheon et al., 2015; Vanslambrouck et al., 2018). In China, college English is a compulsory course for university students of non-English majors. Nowadays, as network technology advances, college English teaching and learning initiate full utilization of technology, especially for language learning beyond the classroom (Pan, 2020). However, in spite of the update of pedagogical conceptions as well as the adoption of multimedia network technology in college English teaching in Chinese universities, some prominent problems and challenges remain unsolved, which can mainly be elaborated as follows. Firstly, the application of multimedia network technology in educational landscapes is not well comprehended. Typically, teachers tend to exaggerate

the “instrumental” characteristics of multimedia network technology and mistakenly perceive a multitude of application of multimedia technology as an effective teaching behavior. For instance, teachers spent a lot of time designing a variety of multimedia courseware, but in the classroom, teachers simply presented the language knowledge to students by clicking the mouse, the result of which is students' being distracted by multimedia courseware and unable to internalize knowledge. Secondly, students' learning autonomy and enthusiasm was not fully mobilized and empowered. Undoubtedly, autonomous learning, which is considered as the most important way of learning in the 21st century, is the basic core literacy that college students need to possess. Apparently, the current college English teaching confined to the traditional classroom fails to fully trigger students' learning behavioral engagement. Thirdly, the technology-based extracurricular learning beyond the classroom was not sufficiently taken into account. The current college English teaching in Chinese universities has not well explored the potential of utilizing the technology-constructed environments to promote students' extracurricular learning. Besides, researchers have found that undergraduate students do adopt technology for learning (Inozu et al., 2010), yet their use of technologies often lacks adequate effectiveness (Kennedy & Miceli, 2010). Therefore, this study aimed to extend a new perspective to the existing research by constructing a task-oriented blended teaching

(TOBT) mode under technology-enhanced learning environments.

## 2. LITERATURE REVIEW

In the network technology environment, burgeoning attention has been paid to the research of learning space (Koper, 2014). Learning space is characterized as an environment which allows learners to be openly accessible, participate freely, and interact, involving both physical and virtual spaces. Currently, the emergence of big-data technology enables educators to accurately examine learners' behavioral characteristics, thereby helping elaborate learners' "different levels of cognitive processing: remembering, understanding, applying, analyzing, evaluating and creating" (Krathwohl, 2002, p. 216). Through combing the existing literature, we found that, on the basis of the different characteristics and design principles of learning space, there was a burgeoning body of literature that divided learning space into multiple categories, such as technology-enhanced space, student-centered learning space, interactive space, and so on (Simonson et al., 2012; Nguyen, 2015). From the perspective of distinguishing individual learning and group-based cooperative learning, it can be generally classified into individual learning space and shared learning space. As for the constructive role of learning space, Bi and Yang (2014) posited that the personalized learning space focuses on the learner-centered professional knowledge connection, and accelerates the free scheduling of learners through different network associations of learning situations (formal, informal), convergence, and the bottom-up effective integration, thus allowing learners to conduct their learning activities in the distributed learning environment.

In contrast to the upsurge of creating new learning space, there is a relative lack of empirical research on the impact of learning space on college students' learning. Brooks et al. (2011; 2012) conducted a series of experimental studies comparing the effects of "student-centered" technology-enhanced active learning classrooms and traditional classrooms on learning effects while controlling such variables as teaching materials and student background. Their research results found that the progress degree, academic performance, classroom engagement and satisfaction degree of students in technology-enhanced active learning classrooms were all higher than those of traditional classrooms. Dori et al. (2005) also found that students in Massachusetts Institute of Technology who conducted learning through TEAL (Technology-enabled Active Learning) space understood concepts significantly better than traditional classrooms, and most students were willing to recommend TEAL space to their peers. Similarly, Guo and Su (2021) discussed the relationship between teacher support, college students' learning engagement and academic self-efficacy in the online learning space. The results indicated that college students' academic self-efficacy and the level of teacher support are relatively high; that the higher the teacher support in cyberspace is, the higher the academic self-efficacy and learning engagement

are; and that learning engagement partially mediates the academic self-efficacy through academic self-efficacy. Considering the external and internal mechanisms, Pan and Shao (2020) explored the influence of teachers' online feedback on college students' learning motivation in the online learning space, finding that teachers' online feedback has a significant impact on students' learning motivation, and meanwhile learning engagement plays an intermediary role. However, despite researchers have conducted some beneficial exploratory studies on the impact of technology-enhanced learning space on learners' learning behaviors and outcomes, the number of empirical studies is insufficient and there is a need for further improvement. From this on, Ellis (2016) put forth that the existing literature has a lot to further expand in terms of the learning space research, as "learning" is considered as a "routine, take-it-for-granted" concept, which not only has a certain degree of fragmentation with the current relatively mature learning theory, but also makes academic circles difficult to form a consensus on how to assess the effectiveness of the learning space, thus hindering the field of theoretical construction and collective progress. Therefore, a more comprehensive and scientific understanding and definition of the concept of "learning" is crucial to both the educational value of the inquiry into learning space and the future development of this research domain (Mirijamdotter et al., 2006; Temple, 2008).

Task-oriented teaching is the educational conception put forward by the famous educator John Dewey, which mainly refers to that, in the actual teaching process, teachers motivate students' learning by setting a series of scheduled task-driven goals through which students complete the teaching objectives and thus make them get a great sense of achievement and satisfaction, so as to promote their intelligence, emotion and skills to all-round development (Campbell, 1995). As can be seen, task-oriented teaching typically considers the tasks as the core to organize teaching activities. In the language acquisition process, these tasks are not language-centered, but draw support from language to complete the tasks to stimulate students to learn language knowledge, cultivate students' language application capacity, and drive students' cognitive, emotional and intellectual development (Wang, 2010). Task-oriented teaching requires teachers to pay attention to students' psychological demands and emotional contradictions in the process of language learning, and to find ways to add rich sentimental elements so as to meet the psychological needs of students and make them willing to participate in classroom teaching. From a linguistic point of view, task-oriented teaching involves the language acquisition theories of "input and output hypothesis" and "interactive hypothesis". From the perspective of pedagogy and psychology, it involves the fundamental theories of "constructivism", "cognitive development", and "multiple intelligences". Therefore, scholars at home and abroad explored the task-oriented teaching from different perspectives. In terms of technology-based task-oriented teaching, Cheng (2013) proposed that the teacher embeds the forms and function of language in

computer-based task-driven objectives and process, which can promote the overall consciousness and acquisition of language through teaching procedures such as teaching modeling, the input and output monitoring, teacher support and task-based group report.

Blended teaching is a new instructional mode that combines the advantages of online learning with classroom learning (Cooney et al., 2000; Singh, 2002). This teaching mode emphasizes student-centeredness, fully mobilizes students' enthusiasm, initiative, and creativity, and uses computer corpus (Cheng, 2022). By bringing the rich "online" digital teaching resources into the "offline" classroom teaching, blended teaching greatly improves the depth and breadth of the teaching content, and helps broaden the horizons of the ecology of learning (Sefton-Green, 2006). Currently, blended teaching prominently manifests the following characteristics. Firstly, the teaching forms can be diverse, demonstrating the integration of online and offline modes. Practically, these two modes work together in a complementary manner, that is, online mode capitalizes on the affordances of resources for the main teaching content of offline classroom. Secondly, the fixed and unified teaching model vanishes, as blended teaching imparts great instructional freedom to teachers. As such, under the premise of task-oriented blended teaching, the teaching process targeted to engage students' cognitive processing by fully taking into account the characteristics of the students in the class. Thirdly, blended teaching expands the time and space of traditional classroom teaching, so that students are not only able to utilize their leisure for "online" learning, but also can obtain the corresponding teaching beyond the classroom, even at home, without being confined by the offline learning venues. Previous research found that the blended teaching modality has become an essential alternative in addressing the limitations of online teaching, while increasing instructor flexibility in teaching and easing the pedagogical transition to more technology-mediated models (Ho et al., 2016; Shorey et al., 2018). The research of blended teaching in Western countries has been relatively mature. Currently, it involves more research on the effectiveness of blended teaching and the qualitative and quantitative research of blended teaching from the empirical perspectives. Similarly, extant attention has been paid to blended teaching in China, focusing on different perspectives of curriculum design, platform-based blended learning and collaborative hybrid learning (Huang et al., 2009; Ma & Zhang, 2011). However, the empirical research on how to systematically constitute the blended teaching mode in boosting college students' technology-based language learning in China is still scant. In view of all this, the exploration on how to build a new blended teaching mode by drawing from the perspective of constructivism, collaboration model and the integration of hybrid learning environment is important, as it helps give full play to the "use of technology for language learning" (Lai et al., 2016, p. 40), improve the subjectivity and initiative of learners, and create a personalized and ecological learning environment.

### 3. METHOD

#### 3.1 Participants

Totally, 82 students (30 males and 52 females) who took the course of college English in a university in Eastern China were recruited in this study. Their ages ranged from 18 to 20 ( $SD=19.33$ ). The students voluntarily participated in this study and were informed of the rights of withdrawal at any stage of this study.

#### 3.2 Research Design and Procedure

The research process typically involves the following steps and methods observed.

In this study, a task-oriented blended teaching mode of college English course from the perspective of learning space (**Figure 1**) was established to conduct a teaching reform. In order to examine the effectiveness of this teaching mode, comprehensive college English test and oral English test were employed in the students being taught before the implementation of the first week of the semester and the 15th week of the semester after the implementation of the teaching reform program. The comprehensive college English test adopted standardized test questions (including vocabulary and structure, reading comprehension, Cloze, with a total score of 100 points), and used machine scoring, so as to reflect the authentic level of students to the greatest extent. Oral English test mainly focused on students' fluency and accuracy in reading sentences and passages aloud. Besides, a survey was conducted to assess students' feedback on this teaching mode.

It is noticeable that the learning space constructed in this teaching mode involves classroom learning space, extracurricular learning space, and the three-dimensional environment of network virtual space. This teaching mode implements a new task-oriented blended college English teaching paradigm which embodies the characteristics of "student' collaborative and independent learning as the dominant position, teacher guidance as the assistance, and interactive network technology as the platform" (see Figure 1). Prominently, this teaching mode is the comprehensive integration of multimedia network technology in teaching content, teaching paradigm and teaching evaluation, the dominant effect of which is the stimulation of students' subjectivity and initiative in the whole learning process. Specifically, in extracurricular learning, the following links were involved: 1) task layout. As the implementer of teaching design, the teacher arranges learning tasks, promotes, coordinates and participates in students' knowledge construction on the basis of the teaching objectives and the analyses of students and resource availability; 2) individual learning. As the main body of knowledge construction, students make plans for their learning tasks, optimize the choice of learning resources, and launch personalized independent learning. In the above two links, the related activities, such as task layout, learning resource collection and sharing, can be conducted through the interactive network platform; and 3) group collaborative inquiry. On the basis of

personalized learning, students conduct group collaborative inquiry, and interact with teachers, peers and network resources with the help of the interactive network platform. Students complete their knowledge construction through independent learning and collaborative group inquiry, and transform the obtained knowledge into specific results of group reports. To stimulate these activities of knowledge creation, the goal of group collaborative learning design is to achieve more productive collaborative outcomes in ways that promote interaction. This can also be done in the form of “problem solving” which sets up thematic tasks that inspire students to conduct deep exploration through collaborative learning behaviors. This teaching mode echoed the research outcome of Hege (2011) who reported that instructors can design an engaged online learning community by creating opportunities for increased student interaction with fellow students, instructors, and digital course materials. In such an instructional design, collaborative resources can be internal, external, or integrated. In classroom learning, the following steps were included: 1) students made group reports on the completed learning tasks in class; 2) the teacher summarized the report of the group, and explained and guided the relevant knowledge acquisition in class; and 3) students then conducted group discussion according to the thematic tasks. In addition. It is worth noting that the linking activities in this teaching mode can help students to realize the docking between extracurricular learning and classroom learning. The knowledge content of classroom learning needs to be internalized and absorbed through linking activities. Therefore, linking activities are a necessary task for individual students with the following three purposes: to test the understanding of the classroom knowledge; to further expand the students’ learning space beyond the classroom; and to better mobilize the students’ learning subjectivity.

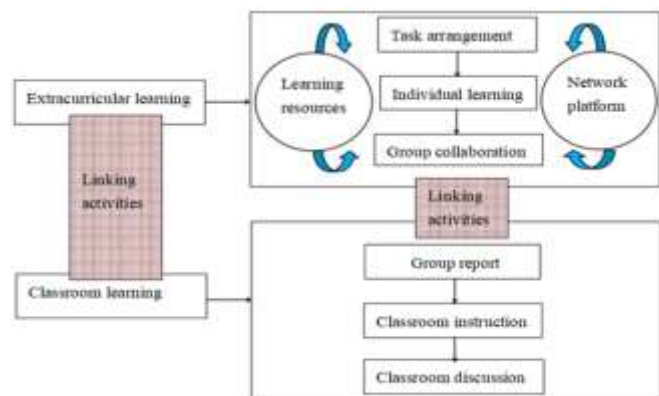


Figure 1. Task-oriented blended teaching mode of college English course

In addition, this teaching mode advocates the blended feature and flexibility of learning space, reflecting the openness of teaching methods, teaching means and teaching environment, which emphasizes that teachers’ instructional activities not only embody the traditional classroom teaching paradigm, but also adopt the network technology to construct an authentic language interaction environment, organize

various task-driven, interactive, collaborative group discussions, and use the interactive network platform for online communication and feedback with students. Moreover, students’ learning activities can also be in diverse forms, and adopt flexible methods for personalized learning, thus, to a certain extent, not limited by time and space. In this teaching mode, the use of the formative evaluation system (see Figure 2) can further boost students’ learning initiative and experience.



Figure 2. Formative evaluation system

## 4. RESULTS

### 4.1 Students’ Learning Performance

The descriptive statistics and paired T-test results were shown in Tables 1 and 2. The research results found that after completing the task-oriented blended college English teaching reform practice for a semester, the students’ comprehensive college English capacity improved significantly, and the average test score increased by 13.07%. The oral English language test score also improved significantly, with the average test score increasing by 9.81%. The paired T-test was all found to be in  $P=0.000 < 0.001$ , indicating a very significant variation. It is worth mentioning that due to the relatively weak English foundation, a multitude of students were embarrassed to speak and were not fluent in oral English in the first week of the semester; but by week 15, their oral expression fluency was significantly enhanced.

Table 1. The description statistics of paired samples for comprehensive college English and oral tests

	N	Mean	SD	Std. Error Mean
Pre-test results of comprehensive college English	82	68.82	6.447	.712
Post-test results of comprehensive college English	82	77.82	5.793	.640



Pair 2	Pre-test results of oral English	82	76.24	5.052	.558
	Post-test results of oral English	82	83.72	6.060	.669

Firstly, the task-based blended teaching mode under the technology-enhanced learning space changed the way students conduct language learning. Learning space is an emerging research orientation for the autonomous, flexible and engaged learning of learners on the basis of technological development. This teaching mode fundamentally changed the traditional learning paradigm of students and converted the classroom-based “knowledge acquisition” behavior into the “autonomous behavior” of knowledge inquiry, which accords with the notion of learning ecology defined by Barron (2004) as “the accessed set of contexts, comprised of configurations of activities, material resources and relationships, found in co-located physical or virtual spaces that provide opportunities for learning” (p. 6). Under the shared learning space, the situation of students’ “waiting around just twiddling their thumbs” has been reversed, as students can be driven by personal interests or thematic tasks assigned by teachers, use various platforms and resources to conduct independent foreign language learning, and realize the communicative interaction at multidimensional “online” and “offline” facets.

**Table 2.** T test for comprehensive college English and oral tests

	Paired					t	df	Sig.(2-tailed)
	Differences							
	Mean	SD	Std. Error Mean	95% Confidence Interval				
			Lower	Upper				
Pre-test of CCE -- Post-test of CCE	-9.00	8.851	.977	-10.945	-7.055	-9.208	81	.000
Pre-test of OT -- Post-test of OT	-7.476	7.767	.858	-9.182	-5.769	-8.716	81	.000

Note: CCE= Comprehensive college English; OT= Oral test

**4.2 Students’ Feedback**

In order to achieve the reliability of teaching research and inquire into its effect, a survey on this task-based blended college English teaching reform was conducted. The results found that, through this teaching reform, 86.58% of students reported that “learning participation opportunities increased”; 90.24% thought that “personalized learning opportunities increased”; 85.36% perceived that “learning resources became richer as compared with the past”; 87.80% believed that “autonomous collection resources increased”; 81.36% contended that “teacher-student interaction increased”; 88.99% addressed that “the interaction between teachers and students increased”; 81.71% assumed “the evaluation process and procedures are more scientific”; and 91.46% held that “their ability of independent learning evaluation improves”.

**5. DISCUSSION**

The above research results indicated that the task-based blended teaching mode under the technology-enhanced learning space achieved efficient teaching outcomes in college English course. It can be found that through a semester of teaching practice, students gained gratifying changes in their perceptions of use of technology for language learning. Grounded on the research findings, some implications were highlighted as follows.

Secondly, the task-oriented blended teaching mode constructed in this study assisted promoting students’ capacity of foreign language acquisition, and helps stimulate students to adopt the network technology to regulate their language learning experience in the collaborative environment of classroom, extracurricular and network virtual spaces. This study finding accords with the previous research which evidenced that the appropriate incorporation of technology allows instructors to facilitate higher teacher-student interactions, foster increased student engagement, and improve students’ learning outcomes (Hastie et al., 2010; Simonson et al., 2012). For instance, in the learning reflection module of the electronics file, one student wrote that “through this semester of learning, I know how to make plans for my own learning, how to independently find my own deficiencies, and set learning goals, and strive to achieve the goals”. Another student mentioned, “I like the way of group learning. Every group member collects information and we focus on a specific topic task, and then discuss the plan, design the group to report the content, and we can also look through the results of other groups on the network platform”.

Thirdly, the task-oriented blended teaching mode empowered students in the process of language learning. The previous research on college English teaching in China scarcely took into consideration students’ learning needs from the perspective of empowering students. Luechauer and Shulman (1993) broadly defined empowerment as “the humanistic process of adopting the values and practicing the behaviors of enlightened self-interest so that personal and organizational goals may be aligned in a way that promotes growth, learning, and fulfillment” (p. 13). The development and application of such concepts as “multi-interactive college English teaching in the technological environments”, “technology-enhanced college English learning activity beyond the classroom” and “E-portfolio serving as a way to record students’ learning processes” in this teaching mode

truly realize the view of the education process from the perspective of students' development. This teaching mode, which expands students' discourse rights, independent thinking capacity and group collaborative learning, is committed to guide students to get learning initiatives and actively build self-directed and collaborative inquiry behaviors, therefore greatly empowering students and promoting their personalized learning.

## 6. CONCLUSION

Considering the learning environments enhanced by network technology, this study constructed the mode framework of task-oriented blended college English teaching and advanced that the essence of foreign language teaching in the technical environment is to promote the change of learners' learning paradigm. Simply put, the network technology has changed the teaching content and the evaluation systems, etc., and also provides the potential to change the teaching mode. This research indicated that the task-oriented blended teaching mode helped change the learners' way of learning, improve students' self-directed and cooperative learning capacity, and empower students' learning. The implementation of this teaching mode is conducive to changing the traditional memory-typed foreign language teaching culture, creating a new technical paradigm of college English teaching, and optimizing classroom teaching and students' academic evaluations. From a macro perspective, this teaching mode provides a sustainable and effective plan for the college English teaching reform to a technical extent. Indeed, the research on college English teaching reform based on the technological environment still needs to be further explored, summarized and improved, but this study is anticipated to provide some enlightenment to the construction of innovative mode of technology-initiated language teaching.

## 7. REFERENCES

- [1] Barron, B. (2004). Learning ecologies for technological fluency in a technology-rich community. *Journal of Educational Computing Research*, 31, 1-37.
- [2] Bi, J., & Yang, X. (2014). Constructing personal learning space in the view of connectivism. *China Educational Technology*, 8, 48-54.
- [3] Brooks, C. (2011). Space Matters: The Impact of Formal Learning Environments on Student Learning. *British Journal of Educational Technology*, 42(5), 719-726.
- [4] Brooks, C. (2012). Space and Consequences: The Impact of Different Formal Learning Spaces on Instructor and Student Behaviour. *Journal of Learning Spaces*, 1(2), 1-14.
- [5] Campbell, J. (1995). *Understanding John Dewey: Nature and Cooperative Intelligence*. Chicago and La Salle: Open Court.
- [6] Cheng, J. (2022). Research on Blended Teaching Strategies of College English Translation Based on Computer Corpus. *Wireless Communications and Mobile Computing*, Vol. 2022: 8631464. <https://doi.org/10.1155/2022/8631464>
- [7] Cheng, K. (2013). The Study of Technology and Task-based Foreign Language Learning. *Technology Enhanced Foreign Languages*, 3, 9-13.
- [8] Cooney, M. H., Gupton, P., & O' Laughlin, M. (2000). Blurring the lines of play and work to create blended classroom learning experiences. *Early Childhood Education Journal*, 27(3), 165-171.
- [9] Dori, Y. J., & Belcher, J. (2005). How Does Technology-Enabled Active Learning Affect Undergraduate Students' Understanding of Electromagnetism Concepts?. *The Journal of the Learning Sciences*, 14(2), 243-279.
- [10] Ellis, R. A., & Goodyear, P. (2016). Models of Learning Space: Integrating Research on Space, Place, and Learning in Higher Education. *Review of Education*, 4(2), 149-191.
- [11] Guo, W., & Su, M. (2021). Research on the Influence of Teachers' Support on College Students' Learning Engagement in E-learning Space: The Mediating Role of Academic Self-Efficacy. *Theory and Practice of Education*, 40(30), 50-54.
- [12] Hastie, M., Hung, I. C., Chen, N. S., & Kinsuk. (2010). A blended synchronous learning model for educational international collaboration. *Innovations in Education and Teaching International*, 47(1), 9-24.
- [13] Hege, B. A. (2011). The online theology classroom: Strategies for engaging a community of distance learners in a hybrid model of online education. *Teaching Theology and Religion*, 14(1), 13-20.
- [14] Ho, V., Nakamori, Y., Ho, T., & Lim, C. (2016). Blended learning model on hands-on approach for in-service secondary school teachers: Combination of E-learning and face-to-face discussion. *Education and Information Technologies*, 21(1), 185-208.
- [15] Huang, R., Ma, D., Zheng, L., & Zhang, H. (2009). Blended-Learning-Based Theory of Course Design. *E-Education Research*, 1, 9-14.
- [16] Inozu, J., Sahinkarakas, S., & Yumru, H. (2010). The nature of language learning experiences beyond the classroom and its learning outcomes. *US-China Foreign Language*, 8, 14-21.
- [17] Kennedy, C., & Miceli, T. (2010). Corpus-assisted creative writing: introducing intermediate Italian learners to a corpus as a reference resource. *Language Learning and Technology*, 14, 28-44.
- [18] Koper, R. (2014). Conditions for effective smart learning environments. *Smart Learning Environments*, 1, 1-17.
- [19] Krathwohl, D. (2002). A revision of bloom's taxonomy: An overview. *Theory into Practice*, 41(4), 212-218.
- [20] Lai, C., Shum, M., & Tian, Y. (2016) Enhancing learners' self-directed use of technology for language learning: the effectiveness of an online training platform, *Computer Assisted Language Learning*, 29 (1), 40-60.
- [21] Luechauer, D., & Shulman, G. M. (1993). Empowerment at work: separating folklore from fact. *At work: Stories of tomorrow's workplace*, 2, 13-14.
- [22] Ma, W., & Zhang, X. (2011). Research and Practice on College English Blended Learning Model. *Technology Enhanced Foreign Languages*, 3, 50-57.

[23] McCutcheon, K., Lohan, M., Traynor, M., & Martin, D. (2015). A systematic review evaluating the impact of online or blended learning vs. face-to-face learning of clinical skills in undergraduate nurse education. *Journal of Advanced Nursing*, 71(2), 255-270.

[24] Mirijamdotter, A., Somerville, M. M., & Holst, M. (2006). An Interactive and Iterative Evaluation Approach for Creating Collaborative Learning Environments. *The Electronic Journal of Information Systems Evaluation*, 9(2), 83-92.

[25] Nguyen, T. (2015). The effectiveness of online learning: Beyond no significant difference and future horizons. *MERLOT Journal of Online Learning and Teaching*, 11(2), 309-319.

[26] Pan, X. (2020). Technology Acceptance, Technological Self-Efficacy, and Attitude Toward Technology-Based Self-Directed Learning: Learning Motivation as a Mediator. *Frontiers in Psychology*, 11: 564294. doi: 10.3389/fpsyg.2020.564294

[27] Pan, X., & Shao, H. (2020). Teacher online feedback and learning motivation: Learning engagement as a mediator. *Social Behavior and Personality*, 48(6), e9118.

[28] Sefton-Green, J. (2006). Literature review in informal learning with technology outside school. Bristol, UK: Futurelab.

[29] Shorey, S., Siew, A. L., & Ang, E. (2018). Experiences of nursing undergraduates on a redesigned blended communication module: A descriptive qualitative study. *Nurse Education Today*, 61, 77-82.

[30] Simonson, M., Smaldino, S., Albright, M., & Zvacek, S. (2012). *Teaching and learning at a distance: Foundations of distance education* (5th ed.). Boston: Pearson.

[31] Singh, H. (2002). Building effective blended learning programs. *Educational Technology*, 43(6), 51-54.

[32] Temple, P. (2008). Learning Spaces in Higher Education: An Under-Researched Topic. *London Review of Education*, 6(3), 229-241.

[33] Vanslambrouck, S., Zhu, C., Lombaerts, K., Philipsen, B., & Tondeur, J. (2018). Students' motivation and subjective task value of participating in online and blended learning environment. *The Internet and Higher Education*, 36, 33-40.

[34] Wang, J. (2010). On application of task-based approach in interpreting teaching under Network environment. *Technology Enhanced Foreign Languages*, 3, 34-37.