

Information Security Construction of SPOC: Path Selection for Japanese Information Acquisition

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Abstract

INTRODUCTION: In the traditional oral Japanese teaching model, Japanese courses emphasize theoretical knowledge of vocabulary and grammar, with few practical functions, low student interest in learning, and low attendance in class. They have made breakthroughs in information technology, e-commerce, and other professional fields.

METHODS: A traditional teaching format is used, with the mains taught by teachers, without using learning platforms or offline teaching. Each lesson contains three elements: preschool, instructional practices, and external extensions. A cloud-based classroom learning platform is part of Cyber Chemistry's preschool and out-of-school learning. Classroom instruction consisted primarily of discussions and exchanges between teachers and students, competitive exercises, and visualization of the results of conversations. To test the effectiveness of the SPOC-based model, the authors administered two speaking tests, as well as related questionnaires and interviews, during and at the end of the test.

RESULTS: Improvements in the intermediate pretest and post-test speaking tests compared to the control group suggest that the Japanese hybrid speaking test model, SPOC, is positively compelling.

CONCLUSION: The class stimulates students' interest and motivation. It plays an active role in developing good learning practices and improving the learning of spoken Japanese.

Keywords: SPOC, Japanese language teaching, online teaching, flipped classroom.

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1 Introduction

In the traditional model of teaching spoken Japanese, Japanese courses emphasize theoretical knowledge of vocabulary and grammar with few practical functions, low interest in learning, and low attendance in classes, with breakthrough developments in information technology, Japanese, e-commerce, and other professional fields (Londgren et al., 2021). Currently, vocational education in Japanese is still teacher-driven, with a uniform teaching model and a rigid curriculum. Japanese language education also needs innovation and classroom renewal to explore new teaching methods suitable for Japanese language learning.

With the development of information technology in education and the deepening of educational reform in Japan, co-education was introduced to teach Japanese at universities and colleges, allowing students to overcome their fear of speaking Japanese, increase their confidence in using the language, and practice language and expression skills (Liang, 2021). Educational reform and informatization are the starting points for improving oral Japanese performance, improving verbal Japanese skills, and reforming classroom education. Using blended learning in Japanese language education helps students acquire professional knowledge and skills and improves the overall business quality of Japanese professionals, which is essential for developing Japanese language education in schools.

With the development of educational knowledge, blended learning has been widely used in higher education, dramatically improving the quality and efficiency of learning and contributing to the development of higher education. Combining back-to-school, SPOC, classroom, and other forms of blended learning has become a new component of learning development. Studying different combined learning models appropriate for students and developing and promoting pedagogical knowledge according to their learning environment and interests is necessary to improve students' speaking skills.

This paper examines the application of the SPOC blended learning model in Japanese school education, the positive effects of this learning model in improving students' interest in learning spoken Japanese, learning efficiency, developing independent study habits, and the effectiveness of the SPOC blended training model. Through this teaching practice, the authors attempt to find the best Japanese-speaking curriculum for SPC in spoken Japanese teaching and other instruction to provide references and experiences and expand SPC's scope in schools.

Focusing on Japanese business life, this study applies the SPOC blended learning model to spoken Japanese learning, develops online and offline blended learning of spoken Japanese, and adapts to the trends of the information learning environment through digital online learning platforms and mobile learning devices. Actively explore the reform of spoken Japanese learning.

This teaching practice tests the effectiveness and feasibility of SPOC-based blended Japanese conversation teaching and introduces a new concept of Japanese conversation course. The online learning platform provides students various quality learning resources, timely course tracking, and instructor feedback. Combining a virtual online environment and an authentic classroom environment satisfies students' interests and needs, dramatically increases their potential motivation to learn, and improves motivation and speaking skills, essential for improving the quality of teaching spoken Japanese in practice. At the same time, the use of information technology helps to improve the quality and level of teacher education, which is crucial for the growth and development of teachers in the new era.

2 Related Work

In 2013, based on in-depth research on MOOCs, researchers proposed SPOC to solve the problems encountered in MOOCs. In the MOOC era, SPOC will replace large-scale open online courses. The academic community generally believes that SPOC is a limited course with a restricted audience, admission requirements, and "confidentiality" characteristics.

From the application stage of auxiliary teaching to promotion and general independent research platforms, the relative success and completeness of the system are issues of concern to significant universities (Shi & Liang,

2021). SPOC has many advantages, such as usefulness, efficiency, and predictive learning methods. In addition, Colorado State University, Duke University, and Vanderbilt University actively participate in various forms of joint education and use the teaching form of special physical education courses (Zhora & Synetskyi, 2021).

With the SPOC experimental programs of these well-known universities, more and more social and vocational schools have joined the SPOC internship team. Students from San Jose State University and Bunker Hill Community College are actively committed to teaching 'systematic courses,' which have been improved at different stages and levels. Students' scores in systematic course exams are higher than those in traditional education, and systematic course teaching has also achieved significant results. Between 2010 and 2019, 359 articles were collected from scientific networks, and the number of related articles increased. The SPOC model is widely used in various foreign institutions.

Tsinghua University is one of the earliest universities in China to implement SPOC teaching practices. The Author has established an online classroom SPOC course platform and experimented with SPOC courses on computer programs and regional rules courses, achieving good academic performance and significantly improving students' grades. Afterward, Tsinghua University also established a "Smart College" learning platform, launched relevant studies, and provided sufficient learning resources; "Smart College" was first applied to dozens of Chinese universities, such as Southwest Jiaotong University, China University of Geosciences and its actual achievements have been greatly praised. Chinese universities have started implementing the SPOC model and exploring new ways to adapt to learning and development in the information age.

In conclusion, SPOC programs have developed deeply in China and applied at a correspondingly higher level with fruitful results in China (Yang et al., 2021). With the development of educational knowledge, SPOC has become one of the most essential forms of learning widely used in all stages of school education. The school curriculum is diverse and sustainable, with significantly different and multiple levels of student ability, lending itself to targeted differentiated and multi-level learning. These characteristics correspond to the small and intensive nature of SPOC programs. SPOC programs effectively bridge the learning time gap, promote individual education, and facilitate knowledge management and assimilation (Talaván et al., 2022). This paper describes the SPOC's Japanese-speaking program, which uses an online learning platform to share learning resources and allows students to practice speaking Japanese and learning the language after class, which is an extension and expansion of the SPOC program and an active learning format for teaching spoken Japanese.

3 SPOC Model

In 2019, foreign researchers conducted a comparative study of four critical articles on SPOC design and development, the results of which were published by SPOC University. As shown in Table 1, the authors noted

that these four forms of learning are mainly related to SPOC, i.e., back-to-school, blended learning, joint, and co-training.

Table 1 Distribution of studies on SPOC types of teaching and learning

Variable-Type of Teaching and Learning	Subject type literature	Related category Literature
Flipped Classroom	9	43
Mixed teaching mode	9	41
Collaborative learning mode	6	20
Cooperative learning mode	2	9
Hybrid learning mode	0	11
Mobile learning mode	0	10
Autonomous learning mode	0	6
Deep learning mode	0	3
Total	26	143

It is worth noting that SPOC is the most common form of study abroad, combining joint and back-to-school learning. The SPOC study based on the China Knowledge Network defined the research theme "SPOC." As shown in Figure 1, a visual analysis of the results of all studies shows that OCPS studies are divided by piece, while most are "back-to-school," "blended learning," and "hybrid learning." In other words, national researchers are paying more attention to "reverse SPOC classrooms" and "blended SPOC learning models."

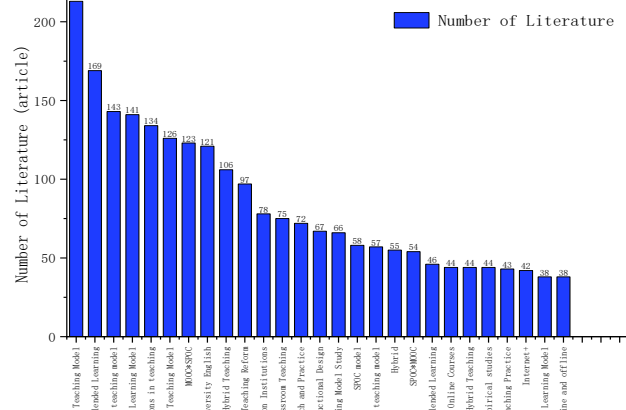


Figure 1 Types of SPOCs for blended learning

With the development of educational knowledge, SPOC has become one of the most essential forms of learning widely used at all levels of schooling. School programs are diverse and sustainable, with significantly different and multiple levels of student proficiency, lending themselves to targeted differentiated and multi-level learning (Tsuchimoto & Kajikawa, 2022). These characteristics correspond to the small and intensive nature of SPOC programs. SPOC programs effectively bridge the learning time gap, promote individual learning, and facilitate knowledge management and assimilation. In 2017, SPOC entered a phase of rapid growth and momentum.

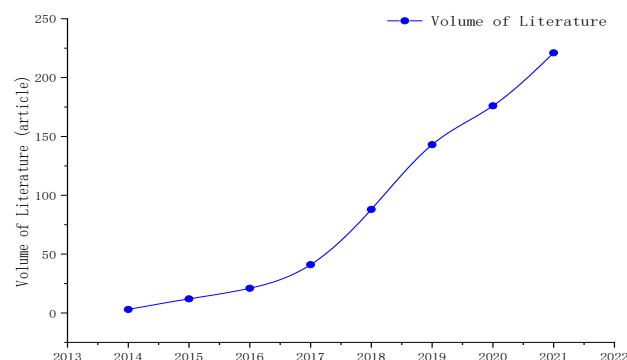


Figure 2 Volume of literature on SPOC blended learning and teaching.

The visual analysis of the data also shows that SPOC-based blended education is most commonly used in instructional theory and management, computer software and applications, foreign literature, higher education, vocational education, medical education, and other disciplines. Teachers and researchers have actively practiced the SPOC blended learning model in various fields and educational levels and have achieved fruitful results in practice and application.

In Japanese language education, SPOC needs to do more research on blended education and more on oral Japanese language education. A familiar online search for the "SPOC blended learning model" includes the subject term "Japanese language." This article consists of 41 articles about Japanese university education. Only one document could be searched for the keyword "spoken Japanese." This study examines the use of blended learning in teaching spoken Japanese at university. No literature exists on Japanese language teaching in vocational schools (Zheng et al., 2021). The reform of oral Japanese language education in vocational high schools is a reform of the practical teaching model of oral Japanese language education in vocational high schools, which helps expand the SPOC blended education research field. The Author can also explore teaching methods more suitable for Japanese comprehensive schools in secondary vocational institutions, promote the renewal and development of Japanese education in secondary vocational institutions,

and improve the quality and definition of Japanese language professionals in secondary vocational institutions.

To use online resources in different ways for blended learning to replace traditional personalized and online learning gradually and to combine digital and personalized learning methods such as SPOC and STEAM with blended learning, thus expanding the research and application fields of blended learning. Moreover, some results have been achieved in theoretical research and practical application. Teachers' proper research has research value on how to use learning information technology more effectively in classroom design, meet the changing individual needs of students, and improve student learning and teacher education.

This paper builds a model based on the former for application to Japanese oral learning:

$$L(C_t, C_{t+1}) = f(C_t, C_{t+1}) + \lambda\phi(C_t, C_{t+1}) \quad (1)$$

This model calculates the comprehensive efficiency of Japanese oral learning, expressed in the $L(C_t, C_{t+1})$ function, while the $f(C_t, C_{t+1})$ process represents the factors that affect the learner's Japanese language foundation. This means the learning efficiency of online flipped classrooms.

3.1 Definition of the Concept of Small Private Online Course

SPOC is the Small Private Online Course abbreviation, usually translated as "Small Limited Online Course." The concept was initially developed by Professor Fox and applied to this course. Spock limits the number of students to a certain number, and the course size varies from 10 to 100. The private classes correspond to open MOOC courses without altering the level and quality of students. Spock has limited student entry requirements (Abdullah et al., 2021). Only students who have reached a certain level can participate in SPOC courses.

By analyzing the concept of SPOC, the Author finds that SPOC and MOOC are the products of "Internet + Education" in the computer environment, and their core is the succession and development of MOOC. By focusing more on the limitations and specifications of the learning environment rather than the MOOC, SPOC can more accurately and effectively improve students' motivation and efficiency, more easily monitor students' learning process, and track feedback and suggestions promptly to reduce the negative impact of graphic learning on students. Using appropriate models to test SPOC and MOOC:

$$con_{SPOC} = C_0 + \beta controls_{MOOC} + \delta + \varepsilon \quad (2)$$

The dependent variable con_{SPOC} represents the per capita SPOC learning efficiency, C_0 considers the comprehensive essential efficiency, $\beta controls$ is the

control variable, and the last two are random interference factors.

3.2 SPOC Portfolio Learning Experiment Design

The interviews were conducted before and after the experiment. The preparation course focused on students' interests, ways of learning Japanese, and the feasibility of combined SPOC learning. Based on the practice of the two different learning methods, data can be compared to understand how students experience and achieve learning outcomes in the course through traditional and blended SPOC.

In reading the materials and teaching practices, the authors noted the underrepresentation of students in Japanese classes. In the literature, the authors, colleagues, and students analyzed the current situation and problems of poor language skills and the effectiveness of Japanese language teaching. They concluded that the main reason is the need for more understanding of Japanese language orientation. Most are blind, passive, and mechanical and will not find the right way to learn or develop good self-service skills and learning methods. The current Japanese schooling is relatively simple. Despite the use of computers, blackboards, PPT textbooks, and other multimedia and teaching materials, the teaching mode still needs to be directed at teachers in the form of classroom teaching without giving full play to the role of students (Communication et al., 2021). Fourthly, teaching spoken Japanese is meaningless; exercises and assignments are usually conducted with conversational statements, without forgetting the use of movements and students' oral expressions, and the curriculum is unreasonable. To change the problems of teaching spoken Japanese, the Author needs to carefully analyze students, teaching materials, and Japanese teaching models, understand and observe Japanese vocational schools and quality courses, and explore the appropriate teaching model in schools.

During the research, analysis, and reflection, it was decided to use the SPOC blended learning model as an experimental variable to teach Japanese conversation courses in the first year of comprehensive schools. The study focused on three themes:

- (1) How does SPOC blended learning affect students' interest in Japanese language courses?
- (2) How does the SPOC blended learning model affect students' self-learning habits?
- (3) How does SPOC-based blended learning affect the learning of spoken Japanese?

3.3 Data Collection and Processing

In September 2020, one week after the school's official opening, a preliminary test survey was conducted for the experimental class of 2001 and control classes of 2002.

The test was administered simultaneously in the second half of Lesson 4. 30 students in 2001, and 28 students in 2002 were administered the initial survey. Students were informed of the prerequisites and precautions for participating in the Japanese-speaking program before completing the anonymous questionnaire, which did not influence student performance or assessment. It was designed for teaching and scientific research. All students had to complete the course within 15 minutes. Before the study, 58 questionnaires were sent with a 100% response rate. After the test, the authors used Excel software to analyze the data.

After the 2021 experiment, students completed their PhD studies in 2001 and 2002. Fifty-eight second-year students participated in the survey. Students had to fill out the questionnaire themselves. At the same time, students were informed that the questionnaire used for the educational study had no negative impact on the student's academic performance. At the end of the study, the questionnaire was sent 58 degrees with a 100% response rate. The authors also used Excel software for data collection, statistics, and analysis. The following models were used to simulate and analyze the collected data:

$$Y_t = C_t + I_t - f(df\bar{i}) \quad (3)$$

$$0 = (1+i_t)I_t + (1+i_t)f(df\bar{i}) - [(1+\gamma/g(f(df\bar{i})))f(df\bar{i})] \quad (4)$$

$$i_t > \gamma/g(f(df\bar{i})) \quad (5)$$

The first and second test questionnaires used Likert's five-star ratings. The data were finally uploaded to SPS25.0 for reliability and efficiency analysis. Cronbach and study α 0859 before and after the survey showed that kronebac α was higher than 0,7, and SME before and after the survey was 0840. in the questionnaire, 0867 SMEs (according to study 0855) were significantly lower than 0.05. the survey results showed that the questionnaire had good reliability and reliability.

4 Comparison of experimental results

This paper analyzes data obtained through speaking tests, interviews, and interviews related to students' interest in spoken Japanese, academic performance, and self-learning habits. It discusses the effects of blended learning on Japanese language teaching in secondary schools.

4.1 Analysis of SPOC teaching on students' interest in learning spoken Japanese

Interest is a prerequisite and motivation for all educational activities and a catalyst for the development of spoken Japanese. In the SPOC-based blended learning model, this work conceptualizes learning activities from the perspective of "interest is the best teacher" and provides learning resources based on student's preferences and needs to stimulate and motivate them. The following model was used to analyze the variables in the initial management process:

$$con_{it} = \alpha_0 + c_0df\bar{i}_{it} + \beta_1controls_{it} + P_i + \delta_t \quad (6)$$

The meaning of the dependent variable con_{it} is the impact of various factors on the SPOC effect over time.

Before the experiment, the authors used a questionnaire to investigate the students' interest in learning spoken Japanese and divided it into five levels. As shown in Figure 3, about 10% of the students in the experimental and control groups were interested in learning spoken Japanese, about 30% in learning spoken Japanese, and 46% in learning spoken Japanese. Similarities were found in the experimental and control classes for students uninterested in learning spoken Japanese. The learning process and activities were developed through cell phones and other electronic devices and various activities and topics of interest to the students.

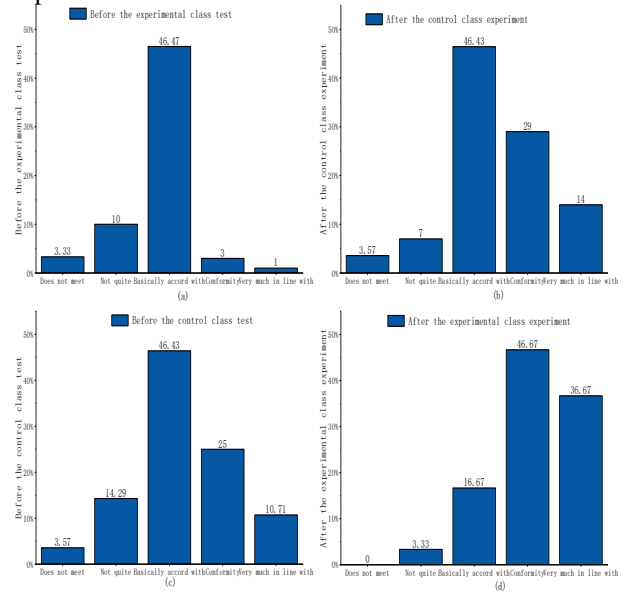


Figure 3 Comparison of the primary results of the experiment

The pretest survey also examined students' perceptions of teaching relationships and evaluation of speaking instruction. Teachers were allowed to assess the final results of the Japanese course through speaking tests and traditional expressions. In the actual study, the authors used the SPOC blended learning model to teach speaking in the experimental classroom. In the online course, the authors actively develop discussion activities in the school and organize group discussion exercises and competitions for students, aiming to provide a language environment and training opportunities near the discussion field(Saleem & Saifi, 2021). In terms of instructional assessment, a holistic approach combines final and process evaluation, which actively focuses on assessing student performance, making the most of incentives, and improving students' language confidence. These teaching methods and strategies meet the student's needs and increase beginners' interest in learning Japanese.

To test how this form of learning affects students' interest in teaching and learning, the authors used a questionnaire to investigate students' interest in conversational learning in two classes and to conduct a comparative analysis of

students' interest in informal learning before and after the experience. Figure 4 shows the change in students' interest in the control group. According to the figure below, students' interest in learning increased before and after the study. However, the data changed slightly, indicating that students in the control class were not interested in learning to speak at the end of the semester.

Figure 4 shows the development of students in the experimental class. 46.67% of the students thought that the SPOC learning model stimulated interest in learning, and 46.67% believed that the SPOC learning model stimulated interest more than the previous test. Students' interest in education decreased from 63.33% to 6.67%. The combination SPOC model significantly increased students' learning interest, while the multifunctional SPOC model was a more critical factor in improving students' learning interest.

Figure 3 also shows the changes in students' interest before and after the experiment. The comprehensive comparative analysis shows that the interest in learning is significantly higher than the control group. Compared to traditional classroom instruction, joint learning based on school-based professional ethics protocols was more appropriate to the needs and interests of high school and college students(Kato et al., 2023).

Based on these results, the Author found that the SPOC-based blended learning model significantly increased students' interest in learning spoken Japanese. The combination of online and offline learning modes, rich learning resources, and diverse learning activities met the needs of high school students, made Japanese practical and exciting, and kept students focused on and in love with oral learning. In short, the SPOC-based blended learning model has actively engaged Japanese business school students in learning spoken Japanese.

4.2 Analysis of SPOC teaching on students' learning habits of spoken Japanese

According to constructivist learning theory, to acquire new knowledge, students need to develop a way of learning about themselves, which contributes to students' sustainable growth and development. Students' learning attitudes influence participation and are the basis for developing good self-learning practices. The authors designed questionnaires, focused on three questions, and learned about students' attitudes toward Japanese-speaking classes through pre-class, classroom communication, and classroom self-assessment. As shown in Figure 5, in some respects, the relationship between students is also essentially the same, i.e., in the traditional learning model, students unthinkingly follow the teacher's rhythm. The same color bar grid in the figure indicates very conforming, conforming, conforming, not very conforming, and not conforming.

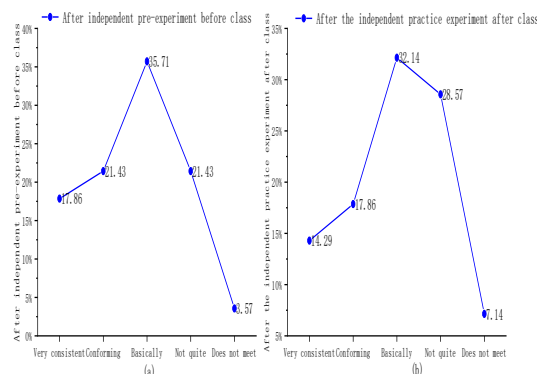


Figure 4 Comparison of students' attitudes before and after the experiment

The data change in the experimental group is more evident than in the control group. The comparison before and after class showed that students' readiness to learn independently before, after, and during the course increased by 20-30%. Self-regulated learning is critical to developing good self-regulated learning practices. Individuals with solid self-discipline can perform training tasks under company supervision and are essential to developing good training practices. As shown in Figure 6, the authors interviewed students again at the end of the semester's instructional practices. Among the students in the control group, 10.71% thought they were better at self-regulation, a 4% increase over the pre-experimental period. 16.67% of the students in the experimental class enjoyed self-regulation(Zhou et al., 2021). Compared to the previous test, 13% of the students in the control group found an improvement in self-regulation. 14.29% of the students in the control group found their self-regulation improved, which was almost 4% better than before the experiment, and 46.67% of the students in the experimental group found their self-regulation enhanced by nearly 37% compared to the previous year. Surveys conducted in two classes showed that students' self-regulation skills significantly improved compared to the control class, i.e., the traditional blended learning based on the ICDE program. Improving students' self-learning skills is essential to enhancing good self-learning practices.

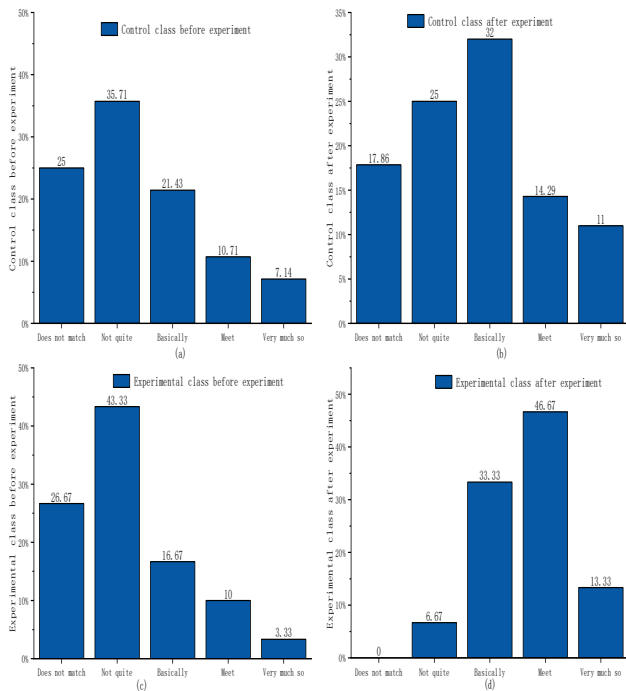


Figure 5 Comparison of students' self-directed learning ability before and after the experiment

The higher the expectations for learning, the more likely students are to feel satisfied and satisfied with their knowledge and to be able to achieve academic success. The pretest study showed that student engagement was low at both levels. At the end of the test, the authors reviewed student engagement in science. As shown in Figure 7, students in the control group estimated that their share of learning increased by nearly 4% compared to pre-experimental students. In comparison, students in the experimental group improved by almost 10% compared to pre-experimental students (Moore & Cotter, 2021). The significant increase in student engagement in the practical sessions suggests that the SPOC portfolio learning approach is more appropriate for developing participatory and independent learning approaches.

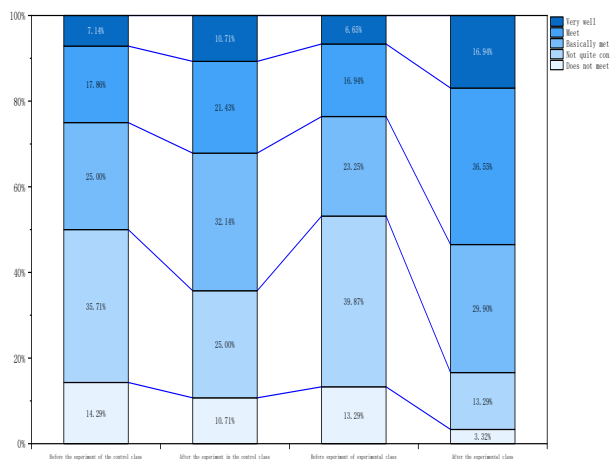


Figure 6 Comparison of students' engagement in learning before and after the experiment

Students were guided through class discussions and exercises in blended education. Maintain the classroom experience in the cloud and interact with in-game mobile software to encourage and encourage students to competitively complete learning tasks and improve leadership skills. Learning skills is not a day. Teachers should continually monitor and encourage students during the learning process, develop pre- and post-course lessons and assignments, and develop learning approaches in all areas of learning for sustainability and lifelong learning. In conclusion, SPOC-based portfolio learning has actively fostered independent Japanese language teaching in vocational schools.

4.3 Analysis of the effect of SPOC teaching on students' learning of spoken Japanese

After this semester's teaching practice, the author analyzed the oral learning effects of students in the experimental class and the control class based on the results of the Japanese speaking test. In the survey, the author proposed the theme "I believe this semester's research has significantly improved my oral skills" and received feedback on the effectiveness of oral learning through students' self-assessment.

The authors compared the experimental class with the control class. The students in the control and experimental groups improved their Japanese speaking skills. Among them, 14.29% of the students in the control group and 20% of the students in the experimental group showed significant improvement in Japanese skills, 32.14% of the students showed improvement in Japanese skills, and 46.67% of the students showed improvement in Japanese skills, which is 15% more than the students in the control group (Iacobelli, 2021). The progress of students' speaking skills in the experimental class was significantly higher than that in the control class, indicating the positive effect of the SPOC-based blended learning model on improving students' speaking skills.

The researchers collected and analyzed the results of the two types of speaking tests and tested the effectiveness of Japanese-speaking learning using SPSS 25.0 in computer science. During the ninth week of the semester, a half-hour speaking test was administered to test the teaching experience and statistical analysis of SPS25.0 progressively. The results are shown in Table 2.

Table 2 Statistical control analysis

	Class	Number of cases	average value	standard deviation	The mean value of the error
Midterm test oral	Test Group	36	66.6951	15.3641	3.6254
Distribution of scores	Control group	29	63.3548	18.6354	2.9548

As shown in Table 3, the average oral test for the study group was 69.72, while the average for the control group was 65.06. The average score of this group is higher than that of the control group. The results of both groups were confirmed by independent t-test samples.

Table 3 Independent tests for the mid-term control

		Test for variance		T-test		
		F	Significance	t	confidence interval	
					Down	Up
Test scores	Same as variance	0.6384	0.3624	1.6284	4.6321	12.9635
	different variance			1.8475	4.1256	14.3625

The results of the test sample T showed degradation values of 1.042 or 0.013, which is less than 0.05, indicating significant intermediate results for both types of oral. The results showed that after nine weeks of SPOC training, there was a difference between the oral of the students in the experimental and control classes, and the oral skills of the students in the practical class were higher than those in the control class. The combined learning model based on SPOC can improve students' Japanese proficiency(Jing et al., 2022).

At the end of the experiment, a speaking final test was conducted in both classes to test the effect of the SPOC blended learning model on students' speaking learning, comparing the speaking test results of the experimental and control dishes, and the data were analyzed using SPSS software. The scientific method made the experimental results more convincing.

Table 4 Test of Japanese speaking instruction

	Class	Number of cases	average value	standard deviation	variance
Distribution of end-of-term scores	Test Group	36	79.3621	12.9634	2.3641

The results showed that the average oral test scores for the control group and control group were 80.78 and 80.78, respectively. Compared to the cheating and honest exams, the average score of both levels of oral exams has improved. The results show the degree of improvement in these two categories. The results of the experimental group increased by about 11 points, while the results of the control group increased by 6.3 points. The average results of the two oral tests conducted in the follow-up and control courses indicate that the increase in test results is even greater, approximately twice that of the follow-up courses. It should be noted that the results of the two oral tests before and after the experimental class are significantly higher than those of the control group.

The authors conducted independent tests on the two T-sample data groups to obtain more convincing experimental results, as shown in Table 5.

Table 5 Independent tests for the end-of-period control

		Test of variance		T-test		
		F	Significance	t	confidence interval	
					Down	Up
Test scores	Same as variance	2.3621	1.658	2.321	2.06394	14.9635
	Different variance			2.125	1.96324	15.0364

SPSS data analysis showed that the significance of two-way discrete units of GIS=0.003 was 0.777, >0.05, p<0.05. Two speaking tests showed that the SPOC-based blended learning model could improve Japanese proficiency, and the combined SPOC model effectively improved Japanese ability and expression in the conversational classroom. The samples were tested in the intermediate and final tests in the experimental and control classes, providing convincing data on the effectiveness of the SPOC blended learning model. The sample t-test results showed a t-distribution value of 1.1024 with a GIS value of 0.00, less than 0.05, reaching a significant level. The results showed a significant difference between the oral Japanese scores of the experimental class students and the final scores of the practical class, i.e., the verbal Japanese scores of the experimental class students were significantly higher, indicating that the student's Japanese scores were substantially higher. The blended learning mode based on SPOC can improve the oral Japanese learning level of Japanese students.

In a recent personal interview, nine students welcomed the SPOC blended instruction, significantly improving their Japanese language skills. To better understand the other students in the class who were not interviewed and to know that most of them preferred the teaching practice of the semester, some students were not interested in learning Japanese because they needed to work hard. Their primary knowledge is required to be better. They usually did not participate in classroom interactions except for some game activities.

Based on these results, the Author concludes that the SPOC-based blended learning model is active and influential in teaching Japanese. The Author fully integrated the SPOC-based combined learning model into instructional design, mastered the three elements of learning theory, and used the four elements of constructivist learning theory in our instruction to give students enough time and resources to learn and integrate them into their lives. Encouraging and guiding students to actively construct knowledge and promote meaningful learning can also lead to good grades in oral education. In

conclusion, SPOC-based blended learning is essential for improving business Japanese in professional secondary Japanese.

Unlike traditional learning, SPOC-based blended learning is more flexible regarding instructional planning, helps develop learning connections based on students' needs and interests, stimulates students' interests, motivates students' self-learning, and enables a more comprehensive form of learning and adopting learning methods. Using online learning platforms and mobile electronic devices, connecting the Internet and offline helps students set rigorous content and additional assignments before and after class. It helps them develop suitable learning methods and habits through self-regulation mechanisms. Based on classroom and stage-process assessments, timely feedback and academic guidance are provided to help students correct problems, learn and absorb knowledge, and improve learning efficiency and outcomes (Chen, 2022). The combination learning based on SPOC has produced good practical results and made a positive contribution to improving the interest of universities in Japanese oral learning, learning habits, and learning efficiency.

5 Conclusion

The development of educational knowledge has placed new demands on every teacher. Teachers must develop, the curriculum must grow, and students must develop. The long-term goal of teachers is to improve their students' learning abilities and overall proficiency. Each new teaching experience is research and study in teaching, and the accumulated quantitative changes inevitably lead to recent qualitative changes. The practice of SPOC mixed education is learning to teach spoken Japanese, which is a compelling pedagogical study. The theoretical basis of the teaching experience is constructive learning theory and scientific theory management, which provides sufficient academic support for the research and lays the foundation for its success. Based on these two learning theories, the authors conducted a pedagogical test in a Japanese business class (experimental class) and a Japanese business class in 2002, focusing on the effects of blended oral learning on students' verbal learning—self-directed ways of learning Japanese and speaking. In the experiments, the authors used learning platforms like Cloud Classroom and WeChat to support education, collected data through experimental tools such as questionnaires, tests, and interviews, and processed and analyzed the data using Excel and SPSS software. The experience shows that SPOC-based portfolio learning can improve students' Japanese proficiency and positively influence Japanese language teaching in vocational schools.

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