

Sustainable Development Strategies to Improve the Effectiveness of College English Hybrid Teaching Literacy of Normal Universities in Sichuan Province

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ABSTRACT

This study explored sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy of Normal Universities in Sichuan province. This study aimed to (1) explore the current situation of College English hybrid teaching literacy of Normal Universities in Sichuan Province, (2) establish the sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy of Normal Universities in Sichuan province, and (3) assess the adaptability and feasibility of the sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy of Normal Universities in Sichuan province. This study employed mixed methods research design, combining quantitative and qualitative research methods. According to the Krejcie and Morgan Sampling table, the sample group of this research will consist of 384 university students, 186 College English lectures, and 274 university administrators randomly selecting from 9 Normal Universities in Sichuan province. The research instruments were a questionnaire, a structured interview, and an evaluation form. Data analysis was used for percentage, M, and content analysis. The research findings revealed the following: (1) The current state of the current situation of College English hybrid teaching literacy of Normal Universities in Sichuan province in five aspects was medium ($M=3.68$). Considering the results of this research, aspects ranged from the highest to lowest level were as follows: the highest level was students' learning attitudes ($M=3.92$), followed by online platform construction ($M=3.85$), teaching evaluation ($M=3.83$), curriculum system establishment ($M=3.44$), and institutional mechanism construction was at the lowest level ($M=3.38$). (2) the sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy were divided into five aspects, which contained 30 measures. There are 6 measures to improve institutional mechanism construction, 6 measures to strengthen the construction of online platforms, 6 measures to optimize curriculum system establishment, 6 measures to comprehensively upgrade the teaching evaluation system, 6 measures to improve students' learning attitudes. (3) The adaptability and feasibility of sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy in five aspects were at high level with the values between 4.00 and 5.00 which are adaptable and feasible, underscoring their practical applicability.

Key words: Sustainable Development Strategies, College English Hybrid Teaching, Normal Universities In Sichuan Province

INTRODUCTION

The researcher of this study has observed numerous challenges college students face in the College English Hybrid Teaching, including imperfect institutional mechanism, limited online platforms, incomprehensive curriculum system, lack of teaching evaluation, students' passive learning attitudes and so on. College English education is a pivotal element in shaping the essence of college education and stands as a crucial component in China's strategy for national rejuvenation through science and education. Based on my years of experience in College English teaching, combined with the latest national policies, academic research results,

and data analysis of 9 public undergraduate university administrators and middle level leaders in Sichuan, this study primarily focuses on College English education in Normal Universities in Sichuan Province. In recent years, information technology has developed rapidly and has gradually penetrated into various fields. With the gradual application of information technology in school education, these changes not only have a significant impact on learning methods but also have a profound impact on educational thinking. The integration of online and offline Hybrid Teaching can make up for the shortcomings of simple offline teaching in the past. The combination of online and offline College English

hybrid teaching literacy methods can effectively improve the teaching quality by combining different learning theories with application methods (Li, 2021).

The United Nations hosted a summit where they proposed the “2030 Agenda for Sustainable Development,” including 17 Sustainable Development Goals (SDGs) to be achieved by 2030 (Agbedahin, 2019). Goal 4 focuses on “ensure inclusive and equitable quality education and promotes lifelong learning opportunities for all,” highlighting the importance of high-quality education, economic growth, and reducing inequalities. Goal 8 “Decent Work and Economic Growth” encompasses educating students about the value of various types of work, fostering their professional ethics and skills, and contributing to personal and societal economic development.

Sichuan, located in the southwest of China, has a geographical position that is less advantageous than that of developed coastal areas, leading to relatively slower regional economic development. The researcher, focusing on College English hybrid teaching literacy tailored to Sichuan universities aligning with the Sustainable Development Goals, delves into the factors influencing the development of College English education in universities in Sichuan Province. By drawing extensively from the advanced experiences of domestic universities and incorporating insights from Sichuan’s educational practices, this study aims to establish the sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy tailored to Sichuan universities. The sustainable development strategies are intended to serve as a reference for other universities, providing a learnable and replicable theoretical foundation and strategic support for College English teaching. The ultimate goal is to establish a comprehensive, diverse, and high-quality sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy of Normal Universities, characterized by the unique features of Sichuan.

Research Objectives

1. To study the current situation of College English hybrid teaching literacy of Normal Universities in Sichuan Province.
2. To investigate the sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy of Normal Universities in Sichuan province.
3. To examine the adaptability and feasibility of the sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy of Normal Universities in Sichuan province.

Research Questions

Based on the objectives above, the following research questions were posed:

1. What is the current situation of College English hybrid teaching literacy of Normal Universities in Sichuan province?

2. What are the sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy of Normal Universities in Sichuan province?
3. What are the adaptability and feasibility of the sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy of Normal Universities in Sichuan province?

LITERATURE REVIEW

Concept and Theory of Hybrid Teaching

Hybrid Teaching is a kind of teaching mode which combines online learning with traditional classroom learning. Through the use of information technology, Hybrid Teaching provides students with more flexible learning style and personalized learning experience in order to enhance students’ learning effect and improve teaching quality. For a considerable period, diverse concepts of Hybrid Teaching have circulated within academic circles, contributing to the multi-faceted theoretical basis of Hybrid Teaching. The concept of Hybrid Teaching can be traced back to the late 1990s. Huang (2020) believes that Hybrid Teaching is “a mixture of face-to-face teaching and computer-aided online learning”. In China, He (2022) introduced the concept of Hybrid Teaching into Chinese education circle for the first time and is the first scholar to study Hybrid Teaching. In his opinion, he thinks that Hybrid Teaching is to combine the advantages of traditional learning methods with the advantages of e-learning; He points out that the so-called Hybrid Teaching refers to the integration of the advantages of traditional teaching and digital teaching, and the reference of the strengths of teacher-centered and student-centered teaching concepts, which give play to the leading role of teachers to monitor, inspire, and guide the teaching process, and fully reflect the autonomy and enthusiasm of students as the main body of learning.(He, 2022) It is the inevitable product of the teaching reform in the information age, especially in rapid development. Its core goal is to improve the teaching quality and teaching efficiency through the reform of teaching mode. It can not only play the leading role of teachers in classroom teaching, but also reflect the main body of students. It is not a simple combination of online teaching and the teaching elements of offline teaching, nor a simple addition of the teaching elements, but the integration of the two teaching methods. It is the reconstruction of all the elements of teaching and learning, and to optimize, combine, or integrate them. The Hybrid Teaching mode is reflected in the following aspects: the mixture of different teaching methods, namely, “teaching method discussion, method independent learning, teaching method project teaching method”; the mixture of different learning resource, namely, “the combination of textbooks and PPT, the integration of textbooks and modern online learning resources”; the mixture of different learning environments, namely, “the mixed use of the traditional classroom and the multimedia classroom, autonomous learning center, network learning platform, smart classroom, etc.”; the mixture of different learning methods, namely, “the combination of

online+offline, independent+cooperation, etc.” (Gao & Xu 2021). At present, the emergence of various online teaching platforms has promoted the application and development of the online and offline Hybrid Teaching mode. The mode of integrating online and offline pays more attention to the play of students’ subjective initiative, puts students in the first place, and promotes the comprehensive enhancement of students’ comprehensive literacy through the integration and optimization of teaching resources. It stands as a subset of quality education.

Concept of Sustainable Development Education in Universities

The concept of sustainable development emerged as a response to the increasing recognition of the need for environmental protection within the broader framework of development. The United Nations Stockholm Conference in 1972 marked the formal integration of environmental protection into the development discourse. Subsequently, the World Commission on Environment and Development’s 1987 report, “Our Common Future,” defined sustainable development as meeting present needs without compromising the ability of future generations to meet their own. This commitment was reaffirmed in the Millennium Declaration of 2000, which established the Millennium Development Goals, including objectives such as universal primary education and gender equality.

UNESCO International Bureau of Education (2024) emphasizes the inter-generational equity inherent in sustainable development, highlighting the imperative to consider the long-term interests of future generations alongside contemporary needs. Wackernagel et al. (2017) extends the concept to universities, delineating three aspects: optimizing internal structures, ensuring fair and comprehensive development for all students, and leaving ample room for the development of younger generations. The elements of “power, quality, and fairness” as essential components of sustainable development. This perspective aligns with the United Nations’ interpretation of sustainable development as involving three interconnected dimensions: society, economy, and environment. Milton (2021) notes the evolution of sustainable development from its ecological origins to encompass broader societal elements. This expansion includes considerations of societal, technological, and political factors alongside traditional environmental and economic aspects.

UNESCO International Bureau of Education (2024) positions sustainable development as a multifaceted strategy focusing on economic quality, environmental protection, and social progress. The goal is to maintain the balance between economic development, environmental stability, and social justice. In conclusion, sustainable development is a holistic concept encompassing environmental, economic, and social dimensions. It seeks to meet current needs without compromising the ability of future generations to meet their own. The evolution of sustainable development reflects a growing awareness of the interconnectedness of ecological, economic, and societal elements in the pursuit of long-term well-being.

Concept of Sustainable Development of College English Teaching

The integration of sustainable development strategies into college English teaching can be approached by integrating the principles of the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs) into educational frameworks which is a multifaceted approach that can empower students to become responsible global citizens and contribute to achieving the United Nations’ SDGs (Chaleta et al., 2021). Ensure that College English teaching accessible to all students, who need to major this course, including those with disabilities or limited access to technology, aligning with SDG 4 on Quality Education. Here are some key strategies and methodologies identified in the literature for effective integration of SDG 4 with College English teaching. 1) Interdisciplinary Curriculum Design: incorporate sustainability themes across various subjects such as environmental science, geography, and ethics to provide a holistic learning experience for students to learn multidisciplinary knowledge; 2) Innovative Classroom Activities: engage students with project-based learning, debates, simulation games, and collaborative research projects that enhance language skills while fostering critical thinking about sustainability issues; 3) Specialized Teacher Training: equip educators with the necessary knowledge and skills to integrate sustainability topics into their teaching through workshops, courses, and access to specialized teaching materials; 4) Novel Assessment Methods: utilize reflective journals, portfolios, and oral presentations to assess both language proficiency and students’ engagement with sustainability issues; 5) Open Educational Resources (OERs): develop and share OERs focused on sustainability in English Language Teaching (ELT) to address material shortages and provide teachers with quality teaching resources; 6) Interdisciplinary Collaboration: partner with subject matter experts to design curricula that synergistically advance both language and sustainability competencies; 7) Professional Development Programs: offer programs supported by educational institutions to empower teachers to integrate the themes of sustainability effectively and provide continuous professional development for educators to effectively utilize blended learning tools, which supports SDG 4 by enhancing educator capabilities; 8) Education for Sustainable Development Framework: use a framework that covers linguistic and cultural features of sustainability central to language teaching and learning; 9) Student Empowerment: develop students’ critical thinking, problem-solving skills, and a sense of agency to encourage active participation in sustainability efforts; 10) Policy Support and Institutional Commitment: advocate for policy changes that recognize and support the integration of sustainability into language education, including funding for resource development and teacher training. 11) Culturally Responsive Teaching: incorporate diverse cultural perspectives in the curriculum to promote understanding and appreciation of different cultures, which relates to SDG 10 on Reduced Inequalities and explore how sustainability is integrated into ELT in different cultural and geographical contexts, identifying teaching practices that are responsive

to local cultures and needs. 12) Environmental Awareness: integrate environmental topics and discussions into the English curriculum to raise awareness about SDG 13 on Climate Action. 13) Digital Literacy: Teach students how to navigate and evaluate online information critically, which is essential for SDG 4 on Education for Global Citizenship and Appreciation of Cultural Diversity; 14) Collaborative Learning: encourage group projects that utilize online platforms to foster teamwork and collaboration, which can contribute to SDG 17 on Partnerships for the Goals; 15) Feedback and Continuous Improvement: implement a system for gathering student feedback to continuously improve the blended learning experience, reflecting SDG 4 on Quality Education; 16) Community Engagement: Involve the local community in the learning process, for example, through service learning projects, which can support SDG 17 by fostering partnerships; 17) Data-Driven Decision Making: utilize data analytics to assess student performance and adapt teaching methods accordingly, which can help achieve SDG 4 on Quality Education through evidence-based practices; 17) Sustainable Resource Use: ensure that the digital resources used in Hybrid Teaching are created and managed with sustainability in mind, considering the environmental impact of technology use; 18) Promoting Health and Well-being: design the blended learning experience to support students' well-being, including mental health, which is connected to SDG 3 on Good Health and Well-being; 19) Language Proficiency for Global Communication: enhance students' English proficiency to enable them to communicate globally, supporting SDG 4.1 on Access to Quality Education and SDG 4.5 on Gender Equality. By weaving these strategies into the fabric of College English Hybrid Teaching, institutions can contribute to a more sustainable and effective educational model that prepares students for the challenges of the 21st century.

Concept and Theory of College English Hybrid Teaching

College English hybrid teaching literacy refers to an instructional approach in which traditional in-person classroom teaching is combined with online or digital learning components. This model aims to integrate the benefits of both face-to-face and digital instruction to enhance the overall educational experience in college English courses. (Hui, 2022). Here's a detailed explanation of what College English hybrid teaching literacy involves: 1) In-person classes: traditional classroom activities such as lectures, discussions, and interactive exercises that occur on campus. 2) Online components: digital learning activities that may include virtual lectures, online discussions, multimedia content, and digital assignments accessible through learning management systems. 3) Blended learning model: hybrid teaching is a specific type of blended learning, where a portion of the course is delivered online, and another portion is conducted in person. This combination can vary based on course design and objectives. 4) Flexible learning opportunities: students can access online materials and complete assignments at their own pace, allowing for more flexible

learning schedules. Digital resources and online activities can be accessed from various locations, reducing the need for constant physical presence. 5) Enhanced interaction: face-to-face interactions with instructors and peers enhance collaboration, provide immediate feedback, and allow for real-time discussions; online forums, discussion boards, and digital communication tools facilitate additional interaction and provide alternative means for engagement. 6) Diverse instructional methods: use of e-books, educational videos, interactive quizzes, and other digital tools to supplement learning; apply the hybrid teaching concepts through in-class discussions, group work, presentations, and practical exercises. 6) Assessment and feedback: evaluations may include online quizzes, digital assignments, and in-person exams or presentations; instructors can provide feedback through online platforms and in-person meetings, enhancing the learning process.

Assessment of the Effectiveness of College English Hybrid Teaching

Assessing the effectiveness of College English hybrid teaching literacy involves evaluating various aspects of the Hybrid Teaching model to determine how well it meets educational goals and improves student outcomes (Kang, 2021). Here are key methods and criteria for evaluating the effectiveness of College English Hybrid Teaching: 1) Students' performance and learning outcomes. Academic achievement: measure improvements in students' grades, test scores, and overall academic performance. Compare these metrics to previous semesters or courses taught in traditional or fully online formats; skill development: assess the development of specific skills such as writing, reading comprehension, and critical thinking through assignments, projects, and exams. 2) Students' engagement and satisfaction. Surveys and questionnaires: conduct surveys to gather feedback from students about their experiences with Hybrid Teaching. Focus on aspects such as the effectiveness of online resources, satisfaction with in-person sessions, and perceived value of the hybrid model; participation rates: monitor engagement metrics such as attendance in online and face-to-face sessions, participation in discussions, and completion rates for online assignments. 3) Instructor's evaluation. Teaching effectiveness: evaluate instructors' effectiveness in managing both online and in-person components. Assess their ability to deliver content, facilitate discussions, and provide support across both modalities; professional development: review the extent to which instructors have been trained in hybrid teaching methods and the effectiveness of this training. 4) Technology and resources. Usability: Evaluate the effectiveness and reliability of the technology used in the hybrid course. Consider factors such as the ease of use of the learning management system, accessibility of online resources, and technical support; resource quality: assess the quality and relevance of online materials. 5) Students' feedback. Qualitative feedback: gather detailed qualitative feedback from students about their experiences with the hybrid teaching model. This can include open-ended responses about what worked well and what could be

improved; focus groups: conduct focus group discussions with students to explore their perceptions of the Hybrid Teaching model in more depth. 6) Learning analytics. Data analysis: use data analytics tools to track student engagement and performance metrics. Analyze patterns related to online activity, participation in synchronous sessions, and performance on assessments; predictive analytics: employ predictive analytics to identify students at risk of underperforming and to tailor interventions based on data trends. 7) Comparison studies. Benchmarking: compare outcomes from Hybrid Teaching with those from traditional and fully online courses. This helps in understanding how the hybrid model performs relative to other instructional methods; control groups: use control groups or comparison sections where students are taught using different methods to assess the relative effectiveness of Hybrid Teaching. 8) Course Evaluation Reports. Post-Course evaluations: administer evaluations at the end of the course to assess overall effectiveness, including student learning outcomes, satisfaction with the hybrid model, and suggestions for improvement; continuous improvement: review evaluation data to make iterative improvements to the course design, content delivery, and instructional methods.

In conclusion, evaluating the effectiveness of College English hybrid teaching literacy involves a comprehensive approach that includes assessing students' performance and engagement, instructor's effectiveness, technology and resources, and students' feedback. By using a combination of quantitative and qualitative methods, educators can gain insights into how well the hybrid model supports learning objectives and identify areas for improvement. This evaluation process helps ensure that Hybrid Teaching methods are effectively enhancing the educational experience and achieving desired outcomes.

RESEARCH METHODOLOGY

The Population

The study population comprises 9 Normal Universities in Sichuan Province. On average, each institution has 40 College English lecturers and more than 100 administrators. The English lecturer population is 360 lecturers and administrator population was 960 administrators. The student population across these institutions is estimated to be around 100,000 students. These details serve as vital demographic information for the study, offering insights into the scale and composition of the academic environment under investigation.

The Sample Group

This study employs the stratified sampling method involving categorizing the population into specific subgroups or strata based on relevant characteristics. 384 students, 186 College English lecturers and 274 university administrators from 9 Normal Universities in Sichuan province were selected in the first stage.

Research Instruments

Questionnaire

Part 1: This section captures information about the interviewee, encompassing details such as gender, grade, major, years of English learning experience, English proficiency of students and gender, age, highest education level, positional title, position, and years of educational management/teaching experience of College English lecturers and administrators.

Part 2: The primary focus of this study involves conducting a questionnaire survey to assess the current state of College English teaching in universities in Sichuan Province. The evaluation covers institutional mechanism construction, online platform construction, curriculum system establishment, teaching evaluation system, students' learning attitudes.

The average value interpretation, based on Likert (1932), is outlined as follows:

4.50 – 5.00: Expresses the highest level.

3.50 – 4.49: Indicates a high level.

2.50 – 3.49: Represents a medium level.

1.50 – 2.49: Reflects a low level.

1.00 – 1.49: Expresses the lowest level.

Structured Interview Form

Following the outcomes of the questionnaire survey on the current state of College English hybrid teaching literacy in universities in Sichuan Province, a structured interview form was crafted, focusing on Institutional mechanism construction, online platform construction, curriculum establishment, teaching evaluation system, and students' learning attitudes. This aimed to provide constructive feedback to society regarding the establishment of the sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy in Normal Universities in Sichuan province, along with suggestions for enhancement.

Evaluation Form

This tool is designed to gather data for goal 3. It involves inviting 5 experts from universities and enterprises in Sichuan Province with knowledge and expertise in strategic planning to evaluate the suitability, feasibility, and practicality of the strategy to improve College English hybrid teaching literacy in universities. The Likert scale method will be utilized for evaluation, with data interpretation as follows:

4.50 – 5.00: Expresses the highest level

3.50 – 4.49: Expresses a high level

2.50 – 3.49: Expresses a medium level

1.50 – 2.49: Expresses a low level

1.00 – 1.49: Expresses the lowest level.

RESEARCH RESULTS

The researchers conducted a comprehensive analysis of the data, segmented into the following three parts:

Current Situation of College English Hybrid Teaching Literacy

This part reports the results of the first research question; that is, the current situation of the sustainable development

strategies to improve the effectiveness of College English hybrid teaching literacy of Normal Universities in Sichuan province. The results are presented in the form of mean scores and standard deviation values. According to Table 1, it showed that the current situation of College English hybrid teaching literacy in 5 aspects was at high level ($M=3.68$). Considering the results of this research aspects ranged from the highest to the lowest level were as follows: the highest level was students' learning attitudes ($M=3.92$), followed by online platform construction ($M=3.85$), teaching evaluation ($M=3.83$), curriculum system establishment ($M=3.44$), and institutional mechanism construction was at the lowest level ($M=3.38$).

Sustainable Development Strategies to Improve the Effectiveness of English Hybrid Teaching Literacy

This section reports the results of the second research question; i.e., the sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy of Normal Universities in Sichuan province. The results are presented in the form of mean scores and standard deviation values. According to Table 2, the sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy were divided into five aspects, which contain 30 measures. There are 6 measures to improve institutional mechanism construction, 6 measures to strengthen the construction of online platforms, 6 measures to optimize curriculum system establishment, 6 measures to comprehensively upgrade the teaching evaluation system, 6 measures to improve students' learning attitudes.

Adaptability and Feasibility of the Sustainable Development Strategies

This section reports the results of the third research question; i.e., results of evaluating the appropriateness and feasibility of strategies for sustainable development of improving the effectiveness of College English hybrid teaching literacy of Normal Universities in Sichuan province, with mean and standard deviation data. Table 3 shows the suitability and feasibility of the sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy in five aspects were at high level with the values between 4.00 and 5.00, which means the sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy are suitable and feasible.

DISCUSSION

The research is on the sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy of Normal Universities in Sichuan province. The researcher summarizes the discussion into 3 parts, details as follows:

Current Situation of College English Hybrid Teaching Literacy

The current situation of College English hybrid teaching literacy of Normal Universities in Sichuan Province Students' learning attitudes was at high level. Students' learning attitudes play a pivotal role in College English Hybrid Teaching. They influence not only the immediate learning process, but also the stage for life-long learning and personal development. A positive learning attitude encourages students to actively participate in both online and offline components of the course, leading to a more engaging learning experience. Students with positive learning attitudes are more likely to be intrinsically motivated, seeking knowledge and skills for personal satisfaction rather than external rewards. Hybrid Teaching often requires students to adapt to new technologies and teaching methodologies. A positive learning attitude helps students to embrace these changes and learn effectively. In a blended learning environment, students need to manage their own learning pace and strategies. A good learning attitude supports the development of self-regulation skills and helps them to persevere through difficulties and maintain efforts towards learning goal. Therefore, students' learning attitudes are fundamental to the success of College English Hybrid Teaching.

Online platform construction was at high level. Online platform construction plays very important role in improving teaching efficiency, enriching teaching content, facilitating the interaction between teachers and students and optimizing learning experience. Online platforms automate and centralize many tasks, such as procurement, project management, and communication. For example, e-tendering and electronic supplier directories allow contractors to post tenders, request proposals, and select suppliers from one place. This reduces the time spent on manual paperwork, phone calls, and negotiations, which are common in traditional methods. What's more, many platforms enable real-time tracking of orders, deliveries, and project progress. This allows teachers to proactively respond if students are behind schedule or if there

Table 1. Descriptive statistics of the current situation of College English hybrid teaching literacy

NO	College English hybrid teaching literacy of Normal Universities in Sichuan Province	<i>M</i>	<i>SD</i>	level	Rank
1	Institutional mechanism construction	3.38	0.86	medium	5
2	Online platform construction	3.85	0.87	high	2
3	Curriculum system establishment	3.44	0.76	medium	4
4	Teaching evaluation system	3.83	0.81	high	3
5	Students' learning attitudes	3.92	0.80	high	1
Total		3.68	0.82	high	

Table 2. Sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy in Sichuan province.

NO	Aspects of sustainable development strategies	Numbers of Measures
1	Institutional mechanism construction	6
2	Online platform construction	6
3	Curriculum system establishment	6
4	Teaching evaluation system	6
5	Students' learning attitudes	6
Total	5	30

Table 3. The Average Value and Standard Deviation of Evaluating the Adaptability and Feasibility of improving the effectiveness of College English hybrid teaching literacy of Normal Universities in Sichuan province.

Sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy	Adaptability			Feasibility		
	<i>M</i>	<i>SD</i>	Level	<i>M</i>	<i>SD</i>	level
Curriculum system establishment	4.32	0.43	high	4.25	0.47	high
Online platform construction	4.39	0.51	high	4.21	0.56	high
Students' learning attitudes	4.42	0.42	high	4.19	0.51	high
Teaching evaluation	4.35	0.45	high	4.22	0.46	high
Institutional mechanism construction	4.38	0.43	high	4.21	0.48	high
Total	4.37	0.45	high	4.22	0.50	high

are any delays in project execution. By using digital records and efficient workflows, universities can reduce administrative overhead associated with manual paperwork and filing.

Teaching evaluation system was at high level. This is because teaching evaluation plays a pivotal role in the context of College English Hybrid Teaching. In blended learning environments, evaluations can guide teachers in adjusting the balance and content of online and offline components to better fit student learning preferences and needs. Teaching evaluation ensures that the teaching methods and materials are effective, providing a mechanism for quality control in education. It offers students insights into their learning progress and understanding, helping them identify areas of strength and weakness. It can also serve as a motivational tool for students, setting goals and providing feedback that can drive engagement and interest in learning. Regular evaluations can reveal gaps or deficiencies in the curriculum, guiding its continuous improvement and adaptation. Data from evaluations can contribute to educational research, offering insights into the effectiveness of teaching methods and learning processes. Evaluations can help teachers determine which technological tools and platforms are most effective and how to integrate them effectively into teaching. Through evaluations, students can learn to self-assess and reflect, key skills in developing autonomous learning capabilities. Teaching evaluation outcomes can inform teachers about the individual needs of students, allowing for tailored support and instruction and can also inform educational policymakers, helping to shape more effective educational policies and standards. In summary, teaching evaluation in College English hybrid teaching literacy is essential for enhancing teaching practices, improving student learning experiences, and ensuring that educational goals are met effectively.

Curriculum system establishment was at medium level. A well-established curriculum system can effectively incorporate online and offline resources, enhancing the learning experience. A curriculum system can help in the efficient allocation of educational resources, ensuring that they are used effectively to support learning, which can also help align teaching methods and materials with broader educational goals, ensuring that the content is relevant and beneficial for students' future careers and personal development. There is no doubt the curriculum system also provides a framework for assessing student performance and progress, which is vital for monitoring educational effectiveness and making necessary adjustments. A structured curriculum ensures that students are exposed to a comprehensive and balanced learning experience, which is essential for achieving the desired learning outcomes, which can be designed to cater to different learning styles and needs of students, allowing for a more personalized approach to education. Teachers can better prepare for their classes when there is a clear and structured curriculum to follow, which can improve the quality of instruction. A well-organized curriculum can streamline the educational process, making it more efficient by reducing redundancy and ensuring that all necessary topics are covered. Encourages Innovation: By establishing a curriculum system that is open to new ideas and technologies, educators can experiment with innovative teaching methods, which can lead to improvements in educational practices. Regular reviews and updates to the curriculum system allow for continuous improvement, ensuring that the teaching methods and content remain current and relevant. In summary, the curriculum system establishment promotes the development of educational modes, and supports the innovation and training of talents to adapt to the current era's development situation and

also emphasizes the importance of a curriculum system in guiding the reform of Hybrid Teaching, ensuring a structured and effective educational approach.

Institutional mechanism construction was at medium level. Institutional mechanism construction is vital for the successful implementation and continuous improvement of College English Hybrid Teaching. Institutional mechanisms can facilitate the integration of new information technologies such as artificial intelligence and big data, which are crucial for optimizing learning methods and improving teaching efficiency. Institutional mechanisms help in establishing a systematic learning process that includes needs analysis, hierarchical teaching objectives, and diversified learning resources. With the support of institutional frameworks, Hybrid Teaching can help in achieving educational equity by providing equal access to learning resources for all students. Institutional support is vital for implementing strategies such as integrated teaching methods (Liu & Ren, 2022). Additionally, multidimensional teaching interaction, and dynamic teaching evaluation, which can also support conducting qualitative and quantitative empirical studies to verify the effectiveness of the teaching model. Institutional mechanism construction plays very important role in improving students' learning efficiency and enhancing their independent learning ability, cooperative learning ability, and innovative thinking ability. Especially in the context of Chinese higher education, institutional mechanisms are essential for integrating ideological and political education into the curriculum, which is an integral part of the educational purpose of "cultivating virtue and cultivating people" (Machado & Davim, 2022). As educational technology rapidly evolves, institutional mechanisms must be in place to adapt to these changes and leverage them for enhancing the teaching and learning experience. In summary, it provides the necessary framework and support for integrating traditional and modern teaching methods, leveraging technology, and ensuring educational equity and effectiveness.

Sustainable Development Strategies to Improve the Effectiveness of English Hybrid Teaching Literacy

The researchers have proposed the sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy in 5 aspects, which contain 30 measures. There were 6 measures to improve institutional mechanism construction, 6 measures to strengthen the construction of online platforms, 6 measures to optimize curriculum system establishment, 6 measures to comprehensively upgrade the teaching evaluation system, 6 measures to improve students' learning attitudes.

In improving institutional mechanism construction, ongoing training opportunities provide a platform for teachers to grow professionally, keeping their skills current and relevant. Establishing a training mechanism promotes a culture of lifelong learning among educators, which is essential in the rapidly changing field of education. Ensuring that teachers are trained in current best practices can help institutions meet accreditation standards and maintain compliance with educational regulations. With training in Hybrid Teaching,

teachers can utilize data analytics to inform their teaching practices, making decisions based on student performance data. Teachers are equipped with the necessary skills to effectively integrate technology into their teaching, improving the quality of instruction. **Adaptability to Change:** A training mechanism ensures that teachers are prepared for the evolving landscape of educational technology and can adapt to new tools and methodologies. Teachers trained in Hybrid Teaching methods can create more interactive and engaging learning experiences, which can lead to better student participation and outcomes. With a better understanding of blended learning, teachers can tailor instruction to meet the diverse needs of students, offering personalized learning paths (Lan, 2024). A culture of continuous professional development fosters innovation, as teachers are encouraged to explore and implement new teaching strategies. Teachers who are well-versed in blended learning can manage their time and resources more effectively, leading to increased efficiency in lesson planning and delivery. A well-structured training program ensures that teaching practices are aligned with the institution's educational goals and objectives.

Universities in Sichuan should improve institutional mechanism construction. By improving such a mechanism, educational institutions can ensure that their English teaching programs are dynamic, responsive to technological advancements, and geared towards the success of both teachers and students. A robust training mechanism can be scaled to accommodate the growth of the institution and the expansion of blended learning programs. In the long run, investing in teacher training can be cost-effective, as it leads to better student outcomes and reduced need for remedial instruction (Li, 2023).

In strengthening the construction of online platforms of College English Hybrid Teaching, give full play to online platform construction. Strengthening the construction of online platforms for College English hybrid teaching literacy is an essential step towards enhancing the quality and accessibility of education. Ensure the platform has an intuitive and user-friendly interface that is accessible on various devices, including smartphones, tablets, and computers. Make sure the platform is accessible to all students, including those with disabilities, by following web accessibility guidelines. Develop a mobile app version of the platform to allow students to learn on-the-go. Ensure the platform has robust security measures to protect student data and uphold privacy standards. Implement analytics to track student progress and provide feedback to both students and instructors. Use this data to improve the teaching and learning experience. Offer personalized learning paths based on the student's proficiency level, interests, and learning pace. Incorporate tools that promote collaboration among students, such as discussion forums, group projects, and peer review systems. Offer training and support for instructors to effectively use the platform and integrate it into their teaching methodologies. Promote the platform to students and faculty through various channels, including social media, email campaigns, and in-person demonstrations. Regularly update the platform based on user feedback and advancements in educational technology.

Foster a sense of community among users by providing spaces for social interaction and support. By focusing on these areas, you can create an online platform that not only supports College English hybrid teaching literacy but also enhances the overall educational experience for students and instructors alike.

Sichuan' universities should improve the online platform construction. Strengthening the construction of online platforms for College English hybrid teaching literacy is an essential step towards enhancing the quality and accessibility of education (Kang, 2021). Create high-quality, interactive, and engaging content that caters to different learning styles, including multimedia elements like videos, audio clips, and interactive quizzes. Ensure the platform has an intuitive and user-friendly interface that is accessible on various devices, including smartphones, tablets, and computers.

In optimizing curriculum system establishment, it involves a multifaceted approach that considers the diverse needs of students while ensuring the curriculum is robust and relevant. Conduct surveys, interviews, and focus groups to understand students' current English proficiency, learning styles, and their goals for taking the course. This will help tailor the curriculum to meet students' specific needs. Integrate content that is relevant to students' fields of study or interests. For example, if the majority of students are engineering students, incorporate technical vocabulary and reading materials relevant to engineering. Ensure the curriculum covers all four language skills: listening, speaking, reading, and writing. Provide ample opportunities for students to practice these skills in a variety of contexts. Utilize educational technology to enhance learning. This could include language learning software, online discussion forums, and multimedia resources. Encourage students to engage with the local community, such as through volunteering or internships, to practice English in real-world settings. Regularly review and update the curriculum based on student feedback, performance data, and changes in educational standards or student needs. By considering all these aspects, you can create College English course that is tailored to the needs of students, which can prepare them for academic and professional success.

Through the interview with the 19 interviewees in Sichuan and a horizontal comparison with economically developed provinces in China, it was found that there are still gaps in the curriculum system establishment in Sichuan's universities compared to the former, which to some extent reduces the academic promotion effect on students. Therefore, universities in Sichuan should continuously motivate students to strive for excellence, cultivate their innovation ability, improve their scientific research level, promote their comprehensive development, and better play their role in academic promotion by improving curriculum system establishment.

In comprehensively upgrading the teaching evaluation system of College English Hybrid Teaching, the evaluation system of College English hybrid teaching literacy can be upgraded to better serve the needs of students and educators, promoting a more effective and engaging learning environment. Blended learning environments offer opportunities to

use a variety of assessment tools. Regularly solicit feedback from students about the assessment process. This can help identify areas for improvement and ensure that the system remains student-centered. Encourage students to reflect on their learning process and the assessments they complete. This can help them develop a deeper understanding of their strengths and areas for growth. Utilize educational technology to streamline the assessment process. This can include online grading systems, automated quizzes, and tools for peer and self-assessment. Incorporate both traditional and innovative methods such as quizzes, essays, presentations, peer reviews, self-assessments, and digital portfolios. Shift the focus from summative assessment to more formative assessment practices. This involves providing students with continuous feedback that helps them understand their progress and areas for improvement. Authentic assessments reflect real-world tasks and situations. They can be more engaging and provide a better measure of a student's ability to apply knowledge in practical contexts. Use clear and detailed rubrics for assessment to ensure that students understand the criteria for success. Rubrics should be shared with students in advance and used consistently by all evaluators. Ensure that all assessments are aligned with the learning objectives of the course. This means that what is assessed should directly relate to what is taught and learned. Regularly review and refine the assessment system based on data, feedback, and changing educational standards. Provide training for instructors on best practices in blended learning assessment to ensure they are equipped to implement the system effectively. Encourage collaboration among faculty to share effective assessment strategies and learn from one other's experiences. Establish mechanisms for immediate and constructive feedback that students can act upon to improve their performance. Be transparent with students about the assessment criteria, grading policies, and the purpose of each assessment.

To ensure the effectiveness of College English Hybrid Teaching, Sichuan universities should comprehensively upgrade the evaluation system of College English hybrid teaching literacy which allows for timely feedback that can be used to adjust teaching methods and content to better suit student needs and improve learning outcomes. An upgraded system ensures that assessments align with broader educational goals, such as preparing students for higher education or the workforce. Upgrading the evaluation system in College English hybrid teaching literacy is essential for creating a more effective, engaging, and student-centered learning environment that prepares students for the challenges of the 21st century.

In improving students' learning attitudes, creating personalized learning paths for College English hybrid teaching literacy can significantly improve students' learning attitudes. Start by assessing each student's current English proficiency, learning style, and goals. This can be done through diagnostic tests, surveys, or interviews. Define clear learning objectives based on the Common European Framework of Reference for Languages or similar standards. Ensure these objectives are aligned with the overall course curriculum. It should also combine traditional classroom teaching with online learning

resources. This can include online courses, video lectures, interactive modules, and discussion forums. Utilize Learning Management Systems can track students' progress, provide personalized feedback, and adapt content based on student performance. Develop individual learning plans for each student based on their assessment results. These plans should outline the resources, activities, and milestones for each student. Teach students how to manage their own learning. This includes setting goals, organizing study time, and using available resources effectively. Provide students with access to a wide range of learning materials, such as e-books, articles, podcasts, and videos that cater to different learning preferences and levels. Encourage collaboration among students through group projects, peer review, and discussion forums. This can help students learn from each other and develop communication skills. While promoting autonomy, ensure that instructors are available for guidance, clarification of concepts, and support when students encounter difficulties.

At present, universities in Sichuan should focus on enhancing students' autonomous learning attitudes. Allow students to adjust their learning paths as needed. This could involve changing the pace of learning, revisiting topics, or exploring new areas of interest. Teachers can create a dynamic and personalized learning environment that empowers students to take charge of their own learning and develop the skills necessary for autonomous learning in College English Hybrid Teaching, making College English hybrid teaching literacy more effective. Regularly review and update the personalized learning paths based on student feedback, new educational research, and technological advancements.

Adaptability and Feasibility of the Sustainable Development Strategies

The researchers invited 5 experts to evaluate the sustainable development strategies to improve the effectiveness of College English Hybrid Teaching. Five experts are from Sichuan Normal University, China West Normal University, Leshan Normal University, Chengdu Jincheng College, Tianfu College of Southwest University of Finance and Economy. These five universities have the highest number of students, good quality of College English Hybrid Teaching, and high reputation among universities in Sichuan, and the invited experts have certain experience and rich theories in the field of College English teaching. The data interpretation for average value based on Likert (1932), the adaptability and feasibility of the sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy in five aspects were at high level with the values between 4.00 and 5.00, which means the sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy are adaptability and feasibility.

CONCLUSION

The research on sustainable strategies for improving the effectiveness of College English Blended Teaching of Normal Universities in Sichuan Province can be summarized in three parts.

Current Situation of College English Hybrid Teaching Literacy

The current situation of College English hybrid teaching literacy of Normal Universities in Sichuan province can be summarized in five aspects. The current situation of College English hybrid teaching literacy in five aspects was at medium level. Considering the results of this research aspects ranged from the highest to lowest level were as follows: the highest level was students' learning attitudes, followed by online platform construction, teaching evaluation, curriculum system establishment, and institutional mechanism construction was at the lowest level.

Sustainable Development Strategies to Improve the Effectiveness of English Hybrid Teaching Literacy

Researcher has proposed the sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy in five aspects, which contain 30 measures. There are 6 measures to improve institutional mechanism construction, 6 measures to strengthen the construction of online platforms, 6 measures to optimize curriculum system establishment, 6 measures to comprehensively upgrade the teaching evaluation system, 6 measures to improve students' learning attitudes.

Suitability and Feasibility of the Sustainable Development Strategies

The adaptability and feasibility of sustainable development strategies to improve the effectiveness of College English hybrid teaching literacy in five aspects were at high level with the values between 4.00 and 5.00, which means the sustainable development strategies to improve the effectiveness of College English are adaptable and feasible.

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