A comparative study on the effectiveness of teaching approaches between live streaming and offline class: a case study of "English and American literature"

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Abstract: Modern technologies have popularized online media-based instruction, especially during the pandemic, with live classes praised for their temporal and spatial flexibility. Despite this, traditional offline classes remain dominant. This study examines the differences in learning motivation, experiences, and teaching quality between live and offline classes through the course "English and American Literature" for 105 junior English majors at a public university in Sichuan Province, aiming to provide empirical insights and teaching strategies to enhance English language instruction and cultural understanding.

Key words: English teaching; live streaming; offline class; learning motivation; learning experience; learning quality

1 Introduction

In traditional English teaching, offline classes are the norm, while live streaming classes have emerged in the new era. Both approaches are essential for student learning, each with distinct strengths and weaknesses in motivation, experience, and quality. This article examines their effectiveness through surveys and data analysis.

Technologies like AI, big data, and machine learning have driven educational technology towards personalization and intelligence. Live streaming classes gained prominence during the COVID-19 pandemic, ensuring the continuity of education and spurring research on their effectiveness.

The differences in presentation, interaction, quizzes, and evaluation between live streaming and offline teaching lead to varied learning motivations, experiences, and quality. This study aims to evaluate the effectiveness of both approaches, optimize their application in teaching, and promote their integration and innovation. By analyzing these differences, we can better utilize both approaches to complement each other, providing valuable insights for post-pandemic education and advancing foreign language learning.

2 Literature review

2.1 Live streaming class and offline class

Live streaming classes began in the 1960s with computer-assisted instruction, evolving by the 1990s into remote teaching via the internet. Wang Ruifeng defined live teaching as real-time, interactive online instruction, making it a

primary form of online teaching [1].

Offline classes are the traditional face-to-face teaching model, emphasizing direct interaction and immediate feedback through lectures, discussions, and experiments.

In summary, live classes enable remote, real-time teaching, while offline classes focus on in-person, direct interaction.

2.2 Research on the two approaches

Domestic research mainly explores factors influencing student learning effectiveness in live teaching and its application. Leng Xiaoping and Li Guoyun found that online learning enhances students' autonomy and efficiency [2]. This study aims to combine the characteristics of online and offline teaching to improve teaching effectiveness. Regarding the learning experience in live classes, a study conducted by analyzing "student course satisfaction surveys" found that education doctoral students had a high overall satisfaction with online courses [3].

International research includes theoretical and practical studies on live online teaching, but lacks comparative studies with traditional offline classes. Most studies separately analyze the pros and cons of each approach. For example, the use of interactive communication tools in online live teaching can promote interaction and enhance students' perception of teacher's presence, thereby ultimately improving students' online learning experiences [4]. And students generally face obstacles such as insufficient materials, lack of communication skills training, reading activity participation as well as interaction, and inability to clarify doubts in English learning in live classes, while these aspects can achieve good results in offline classes [5].

In summary, by analyzing learning motivation, experience, and quality, this study aims to optimize teaching strategies, enhancing student knowledge and learning strategies.

3 Research design and method

3.1 The selection of research methods and objects

This study employed a quantitative research design, collecting data through a survey questionnaire to determine the differences in students' learning effectiveness between live streaming and offline approaches. It is also a case study because it aims to find out the differences in students' learning motivation, experience, and quality under the two teaching approaches. The study was carried out in one public university in Sichuan Province of China. It involved a population of 105 randomly selected senior English major students. The study involved only fourth-year college students because owing to the epidemic, the first half of the "English and American Literature" course for these students was taught through live streaming approach, and the second half through offline approach, so that they had a clear contrast in learning motivation, experience, and quality resulting from the two different approaches. The researchers felt that they could make the comparison clearly and reliably to provide realistic data for the research.

3.2 The design of questionnaire

The research data was collected via a survey, examining students' perspectives on live streaming and offline approaches in three areas: learning motivation, experience, and quality. Respondents rated their agreement from 1 (totally disagree) to 5 (totally agree).

Learning motivation questions were from the Motivated Learning Strategies Questionnaire (MLSQ) by Corno and Mandinach for assessing and enhancing motivation [6]. Learning experience questions were based on Zhang and Li's "Online Course Learning Experience Scale", covering course environment, activities, and effects [7]. Learning quality questions used the Course Experience Questionnaire (CEQ) to evaluate teaching skills, curriculum content, assessment, feedback, and learning resources, with adjustments for "English and American Literature" courses, adding aspects like "the ability of English listening, speaking, reading, and writing".

Quantitative data analysis employed descriptive and inferential statistics using SPSSAU.

3.3 Ethical consideration

Participants were given the option to withdraw from the survey at any time if uncomfortable. Ensuring ethical standards was upheld with data confidentiality on a secure laptop.

4 Findings

The data results from this questionnaire survey span two semesters of the "English and American Literature" course, with the first semester predominantly using live streaming approach, and the second semester primarily employing an offline approach. The questionnaire comprises three sections, each aimed at evaluating students' learning motivation, learning experience, and learning quality under the two distinct approaches. A total of 105 junior English major students participated in this study. Upon analyzing the questionnaire data, it becomes apparent that the majority of respondents generally maintain a positive attitude towards both the live streaming and offline approaches. However, differences in students' learning motivation, experience, and quality between the two approaches also emerge.
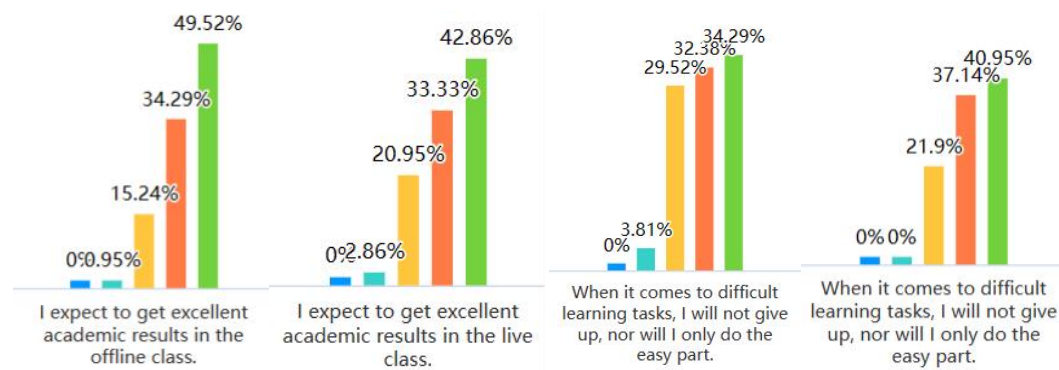
4.1 Learning motivation

Figure 1. Comparison table of self-efficacy and self-regulation for live streaming class and offline class

Among the 105 respondents, it is notable that nearly half (49.52%) anticipated achieving excellent academic results in the offline approach, representing a 6.66% increase compared to those expecting excellent results in the live streaming approach. This suggests that more students are confident in achieving better scores through offline instruction. Most students believed that offline classes offer more direct instruction and supervision, facilitating better comprehension of knowledge and skill development. Moreover, students exhibit stronger self-efficacy in offline classes. Additionally, the percentage of students who persevere when encountering challenging learning tasks is 6.66% higher in the offline approach compared to the live streaming approach. In live streaming sessions, the virtual environment may lead students to bypass confusing difficulties, as there are no immediate repercussions. However, in offline classes, students are more inclined to confront challenges with the assistance of their peers and in adherence to the teacher's instructional procedures. This suggests that students demonstrate stronger self-regulation abilities in offline settings.
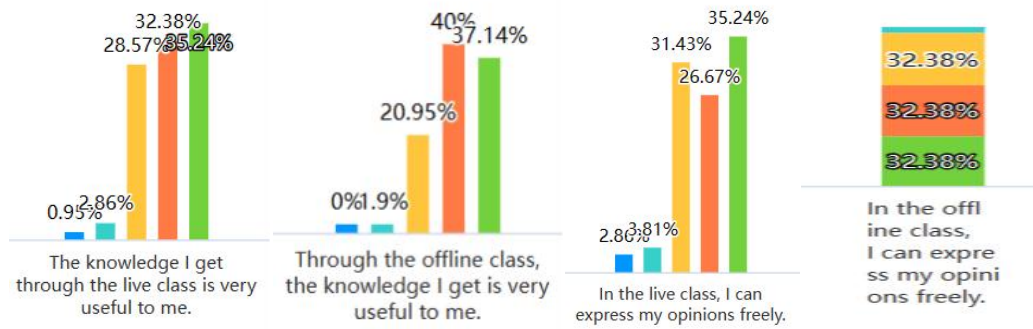
4.2 Learning experience

Figure 2. Comparison table of perception of learning effect and learning activity experience for live streaming class and offline class

In the second section of the survey, respondents' perceptions of the experiences associated with the two teaching approaches were investigated. The most notable disparity emerged in the "Perception of Learning Effect" section, particularly in the item "The knowledge gained through live or offline classes is very useful". Here, 4.76% more respondents deemed the knowledge acquired in offline classes to be highly valuable compared to live classes. This indicates that students perceive teachers in offline classes as more likely to impart useful knowledge, indicating a prevailing belief among students that offline classes offer greater intrinsic value.

Conversely, 2.86% more respondents felt that they could freely express their opinions in live streaming classes compared to offline classes. During offline classes, students may encounter limitations and constraints on their communication due to class regulations and the requirement for mutual respect. Additionally, some teachers may inadvertently favor certain students for interaction in offline classes. However, in online classes, each student has an equal opportunity to participate in teaching activities. Therefore, live streaming classes offer a more liberating experience for students in terms of expressing their opinions.
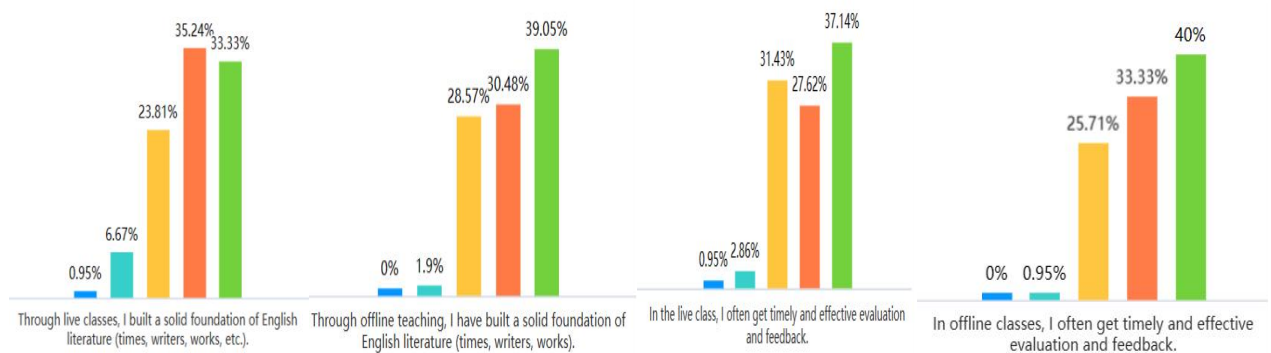
4.3 Learning quality

Figure 3. Comparison tables of basic skill and appropriate assignments for live streaming class and offline class

This part examines the differences in teaching quality between live streaming and offline approaches. Regarding basic skills, 39.05% of the respondents reported a solid foundation in "English and American literature" from offline teaching, compared to 33.33% from live classes, a 5.72% gap. Offline classes offer more direct interaction, practice, and immediate feedback, enhancing foundational understanding. For evaluation and feedback, 40% of respondents received timely feedback in offline classes versus 37.14% in live classes, a 2.86% difference. This difference may be due to students'

diligence in offline settings and the ease of real-time feedback from teachers, fostering a more effective learning environment.

4.4 Summary

Traditional offline teaching remains dominant for its directness and effectiveness, instilling confidence in students. However, live streaming offers notable benefits: enhanced participation, interaction, and flexible learning free from temporal and spatial constraints. Each approach has its strengths and limitations, making the optimal approach dependent on learning objectives, student characteristics, and context. Further research is needed to evaluate their efficacy in various educational settings.

5 Conclusion

Overall, students view both live streaming and offline teaching positively, with offline slightly excelling in practical knowledge and interest. Integrating online and offline approaches in post-pandemic is crucial for optimal learning. The study shows nuanced differences: live streaming favors pedagogical proficiency, while offline is praised for resources and content relevance. Offline teaching remains primary, supplemented by live streaming, leveraging online interaction and offline immersion to enhance efficacy. However, the study's limited sample size suggests caution in generalizing findings. Future research with larger, diverse samples and varied methodologies is warranted.

Conflicts of interest

The author declares no conflicts of interest regarding the publication of this paper.

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