

# The Influencing Factors of High School English Teachers Choosing Different Teaching Media

Purui Si \*

School of English and International Studies, Beijing Foreign Studies University, Beijing, China

\* Corresponding Author Email: puruisi@bfsu.edu.cn

**Abstract.** The issue of high school English teachers' selection of teaching media has garnered widespread attention. However, there remain significant gaps in understanding the influencing factors. This paper analyzes the determinants behind teachers' choices using grounded theory and three-level coding, incorporating interviews with educators from both first-tier cities and county towns in China. The findings reveal substantial disparities in resource availability, technological proficiency, and institutional support between urban and rural schools. Urban teachers benefit from abundant resources and robust technical support, which facilitate higher technological proficiency and more effective media integration with curriculum goals. Conversely, rural teachers face challenges with basic access to technology and limited professional development opportunities. Based on these findings, this paper proposes several recommendations to optimize the use of teaching media: enhancing resource availability through increased funding and community support, improving technological proficiency via targeted professional development, strengthening school support with dedicated IT staff and flexible funding policies, and aligning media with curriculum needs to enhance student engagement.

**Keywords:** High school English teaching, grounded theory, educational technology, urban-rural disparities, professional development.

## 1. Introduction

In recent years, the selection of teaching media by high school English teachers has become a critical topic in educational research, reflecting the evolving landscape of educational technology and pedagogy. With the Ministry of Education in China emphasizing the integration of technology to enhance language proficiency and align with international educational standards, understanding the factors influencing teachers' media choices is increasingly important [1]. As of 2022, approximately 24.6 million high school students are studying English as a core subject, highlighting the need for effective teaching strategies and tools [2].

Despite these advancements, significant disparities persist between urban and rural schools. Urban schools often have access to advanced teaching tools and regular professional development opportunities, while rural schools struggle with limited resources and technological support. These differences can impact the quality of education and the effectiveness of teaching media used in classrooms.

This paper seeks to investigate the underlying factors that influence high school English teachers' choices of teaching media in different educational contexts. By employing grounded theory and three-level coding, the research aims to uncover the reasons behind teachers' preferences and how these choices affect their teaching practices. The paper involves interviews with teachers from both first-tier cities and county towns, providing a comprehensive understanding of the challenges and opportunities they face.

## 2. Methodology

### 2.1. Research Design

To investigate the impacts of different teaching media on English language teaching outcomes and understand the underlying preferences of teachers, this paper adopts a qualitative research approach

using Grounded Theory. The grounded theory, first proposed by Glaser and Strauss in 1967, primarily involves extracting concepts from raw data through progressive coding and further summarizing conclusions through the connections between concepts [3].

## 2.2. Participants and Sampling

Participants will be selected from a diverse pool of English language teachers working in various educational settings. The paper will use purposive sampling to choose teachers who have been actively incorporating different teaching media into their lessons for at least one year. This criterion ensures that the participants have sufficient experience and insights into the practical implications of using various teaching media.

## 2.3. Data Collection

Data will be collected through semi-structured interviews, allowing for in-depth exploration of individual experiences and opinions. Each interview will be structured around key topics such as:

The participants were selected to represent a diverse cross-section of the English teaching community, with varying levels of experience, teaching contexts, and familiarity with different media. Data was collected through a series of in-depth, semi-structured interviews, each tailored to draw out rich, descriptive accounts of the teachers' experiences. The interviews were complemented by classroom observations and a review of teaching materials, providing a multi-faceted understanding of media usage in practice. The interviews focused on ten key areas of questions. First, can you describe the teaching environment you currently work in and the types of media available to you? Second, how often do you use different types of media in your English language teaching, and which do you use most frequently? Third, what are the main factors that influence your preference for certain teaching media over others? Fourth, how do you determine the effectiveness of a particular medium in your teaching practice? Fifth, in which ways have you observed various teaching media impacting student engagement and participation in your classes? Sixth, can you share any specific instances where the use of a particular medium significantly impacted the learning outcomes of your students? Seventh, how do you integrate different media into your lesson plans, and what challenges have you faced in this process? Eighth, have you received any professional development or training in the use of teaching media? If so, how has it influenced your teaching? Ninth, how does the accessibility of different media resources affect your choice and use of them in the classroom? Tenth, looking forward, how do you see the role of media in English language teaching evolving, and what changes would you like to implement in your teaching practice?

## 3. Content Analysis

### 3.1. Open Coding

Open coding is a process of suspending preconceptions, analyzing data sentence by sentence, searching for meanings related to the research topic, and repeatedly scrutinizing, labeling, and extracting concepts and categories [4].

In the study, nodes corresponding to initial concepts were established in NVivo 11 software, with each node supported by relevant "reference points". Concepts appearing at least three times were selected, and similar concepts were categorized, resulting in numerous initial concepts and categories.

### 3.2. Axial Coding

The categories presented in open coding are independent and disorganized. The main task of axial coding is to discover and establish relationships between concepts and categories, further refining main categories [5].

As shown in Table 1, this paper summarized the categories obtained from open coding based on causal relationships, structural relationships, and strategy relationships, and further refined nine main

categories: "Resource Availability", "Technological Proficiency", "School Support", "Curriculum and Media Matching", "Student Engagement and Feedback", "Personal Preferences", "Challenges", "Professional Development", and "Future Trends".

In summary, axial coding refines and organizes the categories by establishing relationships among them. The next section, Selective Coding, will integrate these categories into a cohesive framework.

**Table 1.** List of Axial Coding Results

Main Category	Subcategories	Definition of Subcategories	Node Frequency
Resource Availability	Abundant Resources, Technical Support, Limited Equipment, Funding Support, Unreliable Internet	The availability of teaching resources, technical support, and funding, as well as the limitations and challenges related to equipment and internet connectivity	30
Technological Proficiency	High Proficiency, Basic Proficiency, Self-learning, Frequent Training	The level of comfort and skill in using technology for teaching, including self-learning and training opportunities	25
School Support	IT Support, Funding for New Media, Limited Equipment, No IT Support	The extent of technical and financial support provided by the school for the use of different teaching media	20
Curriculum and Media Matching	Flexible Media Usage, Traditional Curriculum, Reliance on Textbooks	The alignment between the chosen teaching media and the curriculum needs, including flexibility and traditional reliance on textbooks	18
Student Engagement and Feedback	Effective Interactive Media, Positive Feedback, Audio-Visual Materials, Improved Skills	The impact of teaching media on student engagement and the feedback received, including the effectiveness of interactive and audio-visual materials	22
Personal Preferences	Preference for Interactive Media, Resource-Dependent Choices	Teachers' personal preferences for certain types of media and how resource availability influences these choices	15
Challenges	Keeping Up with Technology, Ensuring Equal Access, Resource Scarcity, Lack of Technical Support, Home Access Issues	The challenges faced by teachers in using different teaching media, including staying updated with technology and ensuring equal access	28
Professional Development	Regular Participation in Training, Limited Training Opportunities	Opportunities for professional development related to the use of teaching media	18
Future Trends	Increased Personalization, AI, and VR Integration, Hope for More Resources and Training	The anticipated future trends in teaching media, including the use of advanced technologies and expectations for better resources and training	12

### 3.3. Selective Coding

Selective coding is the process of extracting core categories based on the previous two levels of coding. The core category can integrate all other categories, possessing overarching characteristics [4].

After open coding and axial coding, this paper analyzed the internal relationships among the nine main categories: "Resource Availability", "Technological Proficiency", "School Support", "Curriculum and Media Matching", "Student Engagement and Feedback", "Personal Preferences",

"Challenges", "Professional Development", and "Future Trends", finally identifying the core category as "Resource Availability".

This identification highlights the fundamental role of resource availability in shaping teachers' media choices. The next section will explore the construction of the index system based on this core category.

### 3.4. Index System Construction

"Resource Availability", as the core category of this study, integrates "Technological Proficiency", "School Support", "Curriculum and Media Matching", "Student Engagement and Feedback", "Personal Preferences", "Challenges", "Professional Development", and "Future Trends".

"Resource Availability" plays a foundational role in the process of teachers choosing teaching media. It has had a direct impact throughout their careers, composed of categories such as "Abundant Resources", "Technical Support", "Limited Equipment", "Funding Support", and "Unreliable Internet".

### 3.5. Theoretical Framework

Resource Availability directly impacts Technological Proficiency and School Support. In first-tier cities, abundant resources and technical support facilitate frequent training and high proficiency in using teaching media. In county towns, limited resources, and support result in basic proficiency and self-learning.

Curriculum and Media Matching is heavily influenced by resource availability. Teachers in first-tier cities can use diverse media based on curriculum needs, whereas county-town teachers rely more on traditional textbooks.

Student Engagement and Feedback show that, despite resource differences, interactive and audio-visual materials enhance engagement and receive positive feedback in both contexts.

Personal Preferences indicate a general preference for interactive media among teachers, but their actual use depends on resource availability.

Challenges revolve around access to and technology support. First-tier city teachers face challenges in keeping up with technology updates and ensuring equal access, while county-town teachers struggle with resource scarcity and technical support issues.

Professional Development opportunities are more frequent and diverse in resource-rich environments, benefiting first-tier city teachers more than those in county towns.

Future Trends highlights the aspirations for technological advancements and better support systems, with first-tier city teachers focusing on personalization and advanced technologies, and county-town teachers desiring increased resources and training.

In summary, resource availability is the core factor influencing high school English teachers' choice of teaching media. By enhancing resource availability and providing robust technical support, teachers in different environments can be better supported in optimizing their media choices, thereby improving educational outcomes. The following section will outline specific strategies and recommendations to address these issues and enhance resource availability across different contexts.

## 4. Teaching Suggestions

### 4.1. Enhancing Resource Availability

Enhancing resource availability is fundamental for effective teaching and learning. Schools in first-tier cities should continue investing in up-to-date teaching media and technological infrastructure, aligning with the principles of the Technology Acceptance Model (TAM), which emphasizes the importance of perceived ease of use and usefulness in technology adoption. Maintaining current equipment and purchasing new, innovative tools can further enhance the teaching and learning experience [6]. Schools should ensure a wide variety of teaching media is available to cater to different teaching styles and subject requirements, such as interactive whiteboards, projectors, digital textbooks, and educational apps. In county towns, additional funding and support from government

programs and non-governmental organizations (NGOs) aimed at reducing educational disparities are crucial. These funds can be used to purchase essential teaching media and improve internet connectivity [7]. Furthermore, local businesses and community members can be encouraged to contribute to the educational resources of county town schools, fostering a sense of ownership and support.

#### **4.2. Improving Technological Proficiency**

Improving technological proficiency is essential for both teachers and students. Regular professional development sessions focused on the use of technology in teaching should be provided, aligning with Vygotsky's concept of the Zone of Proximal Development (ZPD) [8]. These sessions should be practical, hands-on, and tailored to the specific needs of the teachers, thereby facilitating scaffolding--providing the support needed for teachers to move from their current level of understanding to a higher level of proficiency. Encouraging a culture of peer learning and collaboration among teachers can also help improve technological proficiency. Teachers who are more adept with technology can mentor those who are less comfortable, fostering a supportive learning environment.

#### **4.3. Aligning Media with Curriculum Needs**

Aligning media with curriculum needs is essential for effective teaching. Teaching media should be carefully integrated into the curriculum to enhance learning objectives, requiring a thorough understanding of both the curriculum and the capabilities of different media. This approach is consistent with Bruner's Spiral Curriculum, which emphasizes revisiting basic ideas repeatedly, building upon them until the student has grasped the full formal concept [9]. Establishing feedback loops where teachers regularly review and discuss the effectiveness of the media in achieving curriculum goals can lead to continuous improvement and better alignment.

#### **4.4. Addressing Challenges**

Addressing challenges related to the use of teaching media is critical. Schools must ensure that all students have equitable access to technology, which might involve providing devices for students who do not have them at home or creating tech access points in the community. Teachers should stay updated with the latest technological trends and advancements in educational media through continuous professional development and participation in educational technology conferences and webinars [10].

#### **4.5. Fostering Professional Development**

On the one hand, fostering professional development opportunities is important for both first-tier city and county-town schools. Schools in first-tier cities should offer advanced training programs in emerging technologies such as artificial intelligence (AI) and virtual reality (VR). These programs can help teachers integrate cutting-edge tools into their teaching practices, enhancing their technological pedagogical content knowledge (TPACK). Providing incentives for teachers to participate in professional development, such as financial bonuses, certificates, and public recognition, can increase engagement and motivation. County town schools should leverage online resources and webinars to provide professional development opportunities, mitigating the lack of local training programs. Forming partnerships with universities can also provide access to expertise and training programs for teachers in county towns.

On the other, preparing for future trends in teaching media is essential. Schools should begin exploring the integration of AI and VR in their teaching practices, as these technologies have the potential to create highly immersive and personalized learning experiences. Implementing pilot programs to test new teaching media and gather data on their effectiveness can help schools make informed decisions about future investments [7,11]

## 5. Conclusion

This research explores factors influencing high school English teachers' choice of teaching media through grounded theory and three-level coding, including interviews with teachers from first-tier cities and county towns. Key findings reveal significant differences in resource availability, technological proficiency, and school support. First-tier city teachers benefit from abundant resources and robust technical support, leading to higher technological proficiency due to regular training, aligning with Vygotsky's Zone of Proximal Development. Effective media integration with curriculum goals is more prevalent in first-tier cities, reflecting Bruner's Spiral Curriculum theory. In both contexts, interactive and audio-visual media enhance student engagement, supporting the Constructivist Learning Theory.

Challenges involve equitable access to technology, with first-tier city teachers managing technological updates and county-town teachers struggling with basic access. Professional development opportunities are more available in first-tier cities, highlighting the need for improved training in rural areas. The choice of teaching media is a complex decision influenced by multiple factors, including resource availability, technological proficiency, school support, curriculum alignment, student engagement, personal preferences, challenges, professional development, and future trends. By addressing these factors comprehensively, schools can create an optimal learning environment that leverages the strengths of various teaching media to enhance educational outcomes. This requires a concerted effort from all stakeholders, including teachers, administrators, policymakers, and the community, to ensure that every student has access to high-quality education regardless of their geographic location.

## References

- [1] Ministry of Education of the People's Republic of China. Report on the Development of China's Education System. Beijing: Ministry of Education, 2022.
- [2] Ministry of Education of the People's Republic of China. National Educational Statistics Yearbook 2022. Beijing: Ministry of Education, 2023.
- [3] Glaser B G, Strauss A L. The discovery of grounded theory: Strategies for qualitative research. Chicago: Aldine Publishing Company, 1967.
- [4] Chen X M. Exploration of the application of grounded theory in Chinese educational research. Peking University Education Review, 2015, 13 (01): 2 - 15+188.
- [5] Chen, X M. Qualitative research methods and social science research. Beijing: Educational Science Publishing House, 2000: 327, 333.
- [6] Davis F D. Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 1989, 13 (3): 319 - 340.
- [7] UNESCO. The challenges and opportunities of Artificial Intelligence in education, 2023. Retrieved from <https://www.unesco.org/en/articles/challenges-and-opportunities-artificial-intelligence-education>.
- [8] Vygotsky L S. Mind in Society: The development of higher psychological processes. Cambridge, MA: Harvard University Press, 1978.
- [9] Bruner J S. The process of education. Cambridge, MA: Harvard University Press, 1960.
- [10] Grassini S. Shaping the future of education: Exploring the potential and consequences of AI and ChatGPT in educational settings. Education Sciences, 2023, 13 (7): 692.
- [11] Abunaseer H. The use of generative AI in education: Applications, and impact. Technology and the Curriculum: Summer 2023, 2023.