

Digital Language Learning and Cultural Philosophy: Analyzing Immersion, Values, and Identity Formation

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Abstract: This study focuses on strategies to enhance educational effectiveness in online language learning. Personalized teaching, including big - data - based learner diagnosis and the application of adaptive learning systems, aims to meet diverse learning needs. Through the design of various interactive activities and the establishment of real-time feedback and evaluation mechanisms, interactive teaching stimulates students' learning enthusiasm. The transformation of teacher roles, with teachers acting as learning facilitators and improving their professional qualities through a training system, plays a crucial role in promoting educational effectiveness. These strategies provide a comprehensive approach to improving the quality of online language education.

Keywords: Educational Effectiveness; Personalized Teaching; Interactive Teaching; Teacher Role Transformation; Big Data; Adaptive Learning System

1. INTRODUCTION

With the rapid development of information technology, the application of the Internet in the field of education is becoming more and more in-depth, and online language learning platforms have gradually become an important supplement to traditional classroom teaching with the advantages of convenience, diversity and personalization. According to market data, the global online language education market size was about \$30 billion in 2020, and is expected to climb to \$50 billion in 2025, and the global online language learning platform market size will reach [X] billion US dollars in 2022 (according to the latest authoritative report). Big data, virtual reality and other technologies are widely used in it, artificial intelligence realizes personalized learning recommendations, big data helps optimize course content and teaching methods, and virtual reality brings immersive learning experience. However, the current online language learning platform still faces many challenges, such as the uneven quality of learning resources, the lack of interactivity, the difficulty in ensuring the learning effect, and the insufficient supervision of the platform, which affect the experience and effectiveness of learners to a certain extent. Learners are immersed in the target language and cultural environment, and can be exposed to rich language materials, covering authentic expressions,

cultural backgrounds and social customs, etc., which will help to deeply understand the connotation and usage of language, and significantly improve language skills, such as the research of the Autonomous University of Madrid shows that VR technology can help students alleviate language learning anxiety and improve language production ability. Research from Penn State University shows that virtual classroom technology can lead to significant improvements in speaking fluency, vocabulary and grammar. Therefore, the research on the creation of cultural immersion on online platforms is of great significance, which can theoretically provide a basis for the teaching design and resource development of online language education, expand the application of educational technology in the field of language education, and guide platform developers to optimize and upgrade the platform, develop more culturally immersive functions and resources that meet the needs of learners, enhance competitiveness, and help teachers design more effective teaching strategies with the help of the platform to guide students to improve their language ability. For learners, it can bring a better learning experience, improve learning efficiency and results, enhance cross-cultural communication skills, lay a solid language foundation for future development, and play a positive role in promoting the development of language education and promoting cross-cultural communication and cooperation in the context of globalization (Istifci, 2017).

2. RESEARCH STATUS AT HOME AND ABROAD

The research on online language learning platforms at home and abroad has been explored for many years and has achieved fruitful results. In foreign countries, the research direction mainly focuses on the application of technology and the innovation of teaching mode. With the rapid development of technology, virtual reality (VR) technology is gradually emerging in the field of language learning. Through VR technology, learners can immerse themselves in the virtual language environment and interact with virtual characters, which greatly enhances the fun and immersion of learning. For example, some foreign research teams have developed VR-based language learning courses, which allow learners to feel as if they are in foreign streets, shopping malls, schools and other scenes, and practice language in real situations, and have achieved remarkable teaching results. In addition, foreign countries are also actively exploring the personalized teaching mode based on artificial intelligence, through the

analysis of learners' learning data, tailor-made personalized learning paths and learning content for each learner, and improve learning efficiency (Arvanitis, 2019). Domestic research focuses on localized teaching strategies and platform function optimization. In view of the language learning foundation, learning habits and characteristics of the education system of domestic learners, domestic research is committed to exploring teaching strategies suitable for local students. For example, in view of the common problem of weak oral expression ability of domestic students, this paper studies how to increase students' oral practice opportunities and improve their oral expression level through a combination of online and offline teaching methods. In terms of platform function optimization, domestic research focuses on improving the ease of use, stability and resource richness of the platform. By optimizing the interface design, learners can find the learning resources they need more conveniently; Strengthen technology research and development to ensure the stable operation of the platform in the case of high concurrency; Integrate all kinds of high-quality teaching resources to provide learners with more comprehensive and systematic learning materials (Blake, 2011). However, despite the remarkable achievements in the research of online language learning platforms at home and abroad, there are still obvious deficiencies in the research on the deep correlation between cultural immersion and educational effectiveness. Most of the current studies separate the creation of cultural immersion from the evaluation of educational effectiveness, and lack systematic integration. As for how to significantly improve the effectiveness of education through effective cultural immersion, a complete and scientific theoretical system and practical methods have not yet been formed. This research gap needs to be filled urgently in order to provide more solid theoretical support and practical guidance for the further development of online language learning platforms.

3. ANALYSIS OF THE CURRENT SITUATION OF ONLINE LANGUAGE LEARNING PLATFORMS

3.1 Market Size and Development Trends

In recent years, the online language learning platform market has boomed and continued to expand. Globalization and the popularization of Internet technology have led to a sharp increase in the demand for language learning, which has opened up a broad space for it. According to the data, the global online education market will reach \$166.55 billion in 2023, of

which online language learning apps will generate \$1.087 billion in revenue and 231 million downloads. The global online education market is expected to grow at a CAGR of 9.1% from 2023 to 2028, and the online language learning market will also grow (Blake, 2011). China's online language learning platform market is also growing rapidly. Since the integration of the Internet and language education at the end of the 20th century, it has developed from early web recording and broadcasting to today's real-time interactive teaching on the client, and the teaching effect has been significantly improved. From 2016 to 2019, the market was in a period of rapid development, with an average annual compound growth rate of 38.1%, and the scale in 2019 was 48.2 billion yuan. From 2020 to 2021, due to the impact of the epidemic and the restriction of offline education, the Ministry of Education advocated "suspending classes without suspending learning", and the demand for online language education surged, reaching 122.96 billion yuan in 2021, with an average annual compound growth rate of 59.88%. Although the market is expected to grow steadily at an average annual compound growth rate of 4.63% from 2022 to 2026 due to the impact of the "double reduction" policy, the scale is still expected to reach 118.23 billion yuan in 2026. Technology has given a strong impetus to the development of online language learning platforms. Artificial intelligence technology can accurately analyze and provide personalized learning content recommendations and path planning based on users' multi-dimensional data. For example, Duolingo uses its self-developed AI model "Birdbrain" to generate customized exercises and courses based on users' learning behaviors and progress, improving learning efficiency and experience. Big data technology can deeply mine massive user learning data, help the platform understand user needs, difficulties and trends, optimize courses and teaching methods, and improve teaching quality (Lai et al., 2016). Virtual Reality (VR) and Augmented Reality (AR) technologies bring new immersive learning experiences. With the help of VR technology, learners can immerse themselves in a virtual language environment, such as simulating foreign streets and other scenes, interact with virtual characters, enhance their sense of realism and interest, and improve their language application and oral expression skills. AR technology overlays virtual language learning content into the real world, providing real-time language translation, word recognition, and other functions to help learners understand and grasp knowledge. Changes in market demand have a profound impact on the development of the platform. With the increasing diversity and personalization of needs, the platform is no longer limited to traditional courses, but focuses more on

meeting the special needs of different groups. Launched targeted courses such as business English for professionals to improve their language application skills in workplaces; Increase interest development courses such as animation and Japanese for the student body to stimulate their interest in learning. In the context of globalization, the need for cross-cultural communication has prompted the platform to integrate more cultural elements and cultivate learners' intercultural communication skills to adapt to international exchanges (Ho, 2018).

3.2 Platform Type and Functional Features

At present, there are various types of online language learning platforms, including comprehensive, social, and vertically segmented, each with its own unique functional characteristics, and its advantages and disadvantages in creating a sense of cultural immersion. Comprehensive platforms such as Duolingo and Rosetta Stone have comprehensive courses and rich resources. Duolingo offers more than 40 language courses at all levels of learning, including grammar, vocabulary, listening, speaking, and more, using gamification and situational teaching methods to increase learners' interest and engagement. The platform also has a large number of text, audio, and video resources, and learners can choose the learning method according to their needs (Cakrawati, 2017). In terms of creating a sense of cultural immersion, the comprehensive platform introduces a large number of real language materials, such as foreign language film and television, news, etc., so that learners can get in touch with authentic expression and cultural background knowledge, and integrate cultural knowledge into the course, introducing the history and geography of the target language country. However, due to the wide range of courses, the exploration of specific cultural fields is not deep enough, the depth of cultural immersion is limited, and the interactivity of the platform is weak, which affects the cultural exchange experience. Social platforms are represented by HelloTalk and Tandem, which are highly socially interactive. With more than 150 languages, HelloTalk offers a variety of ways to communicate with global learners in real-time, swap languages, and correct mistakes. The platform also has rich social functions, which is convenient for learners to establish a social circle (Baker et al., 2018). In terms of creating a sense of cultural immersion, social platforms have unique advantages. Learners can learn more about the culture by communicating with native speakers or other learners, experiencing the cultural thinking, values and social etiquette of the target language, and participating in online cultural

exchange activities. However, it is difficult to ensure the content and quality of platform communication, and there are few learning resources and a lack of systematic curriculum system, which affects the learning effect. Vertically segmented platforms focus on specific areas or language learning, and are professional and targeted. For example, Hujiang Business English, which focuses on business English, provides a variety of business English courses, closely combines business scenarios, cultivates language application skills, and provides a large number of learning materials (Komochkova & Ikonnikova, 2019). In terms of cultural immersion, vertically segmented platforms can dig deep into the cultural connotations of specific fields or languages, such as platforms that focus on learning Japanese animation, and introduce Japanese animation culture in depth when teaching Japanese. However, its course content and resources are single, which is difficult to meet diverse needs, and the user group is small, and the social interaction is weak, which affects the scope and effect of cultural exchange.

3.3 Existing Problems and Challenges

Despite the progress of online language learning platforms in the market, with diverse functions and types, there are still many problems in creating cultural immersion and improving educational effectiveness. In terms of cultural immersion, the depth and breadth of the content of the platform are insufficient, and most of them stay on the surface of introducing festivals and scenic spots, and lack the excavation of the core connotation of culture, such as values, ways of thinking and social customs. Cultural knowledge is fragmented and lacks a system architecture, making it difficult for learners to construct an overall cognitive framework (Yulia et al., 2019). In terms of teaching mode, the traditional teaching mode is seriously restricted, mostly based on teachers' lectures, lacking interaction and interest, and it is difficult to stimulate learners' enthusiasm, resulting in poor learning results. Personalized teaching is insufficient, the platform does not provide personalized content and methods according to learner differences, and the unified curriculum and pace cannot meet different needs. The interactivity of the platform is prominent. The interaction between learners and teachers is not timely and in-depth, and online Q&A and other links are mere formalities. There is a lack of interaction between learners, a lack of effective communication platforms and cooperation mechanisms, and it is difficult to form a good learning atmosphere (Alqudah & Khasawneh, 2024).

4. STRATEGIES FOR CREATING A SENSE OF CULTURAL IMMERSION

4.1 Technology Empowerment: Leverage Emerging Technologies to Create an Immersive Environment

4.1.1 Application Of Vr/Ar Technology in Language Learning

VR (Virtual Reality) and AR (Augmented Reality) technologies are emerging forces in today's education landscape, revolutionizing online language learning platforms and providing new ways to create cultural immersion. VR technology creates a highly realistic virtual language environment that makes learners feel as if they are in a real scene in the target language country, as shown in Figure 1. Learners can have a conversation with virtual characters on the virtual street and feel the local customs; You can also go into virtual shops, restaurants, museums and other places, and use language to communicate in real situations, which greatly enhances the sense of realism and immersion in learning. A study of 100 learners who used VR technology for language learning found that after three months of using a VR language learning platform, their oral fluency increased by an average of 20%, and their understanding and identification with the target language and culture were significantly enhanced.

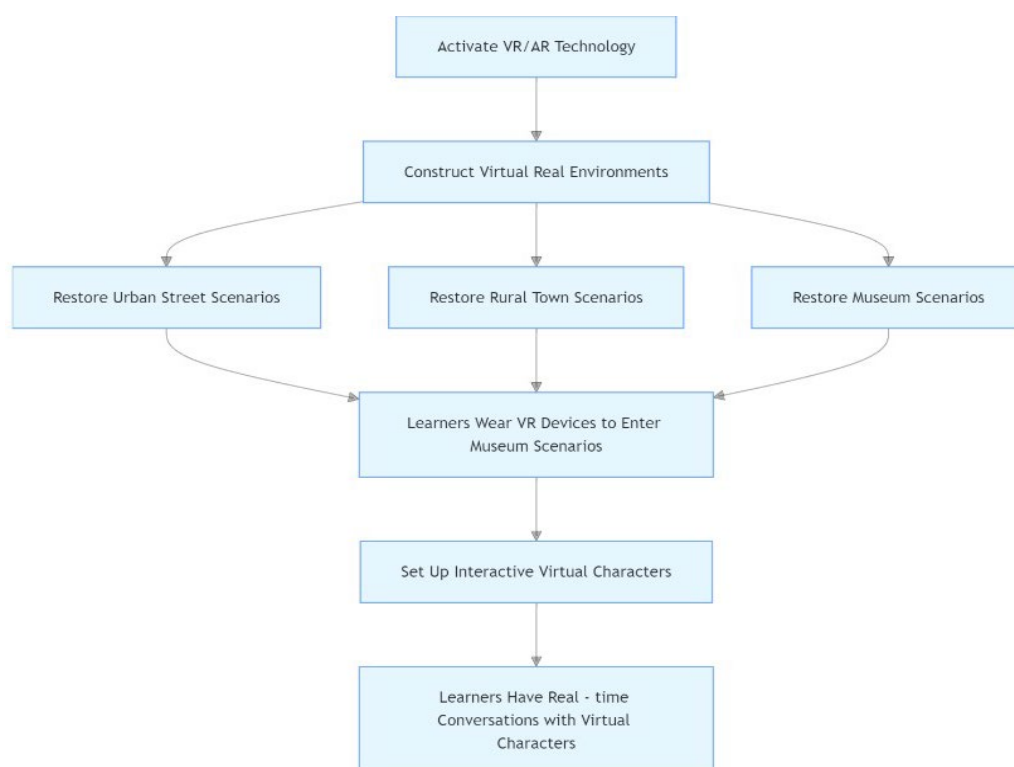


Figure 1: Using VR/AR Technology to Create Immersive Scenarios

The application of VR technology in language learning is rich and varied. In terms of vocabulary learning, by building 3D virtual scenes, combining vocabulary with specific objects and situations, it helps learners understand and memorize vocabulary more intuitively. When learning "fruit" related vocabulary, learners can see the real appearance of various fruits in the virtual fruit market, touch and pick them up, and hear the corresponding pronunciation and example sentences, this multi-sensory learning method can effectively improve the effect of vocabulary learning. In grammar learning, VR technology is used to create a variety of language situations, so that learners can understand and master grammar rules in practical use. To set up a virtual business meeting scene, learners need to use the correct grammatical structure for business negotiation and communication, and deepen their understanding and application of grammatical knowledge through practice (Al-Mubireek, 2019). AR technology combines virtual information with the real world, adding more interactivity and fun to language learning. Learners can scan real-world objects, pictures or scenes through devices such as mobile phones or tablets to obtain relevant language learning content, such as vocabulary explanations, pronunciation, cultural background knowledge, etc. Scan the cover of an English book to pop up the introduction of the main characters, the background of the story, and related English words and phrases. Scan a photo of a tourist attraction to learn about the English description of the attraction, the local culture and customs, and the commonly used English expressions for tourism. This way of closely integrating the learning content with the real scene makes learning more vivid and interesting, and can stimulate learners' interest and initiative in learning. AR technology also plays an important role in language teaching activities. Teachers can use AR technology to design interactive teaching courseware and display rich teaching resources in the classroom, such as virtual animations, videos, models, etc., to enhance the intuitiveness and attractiveness of teaching. When explaining English texts, AR technology is used to present the scenes in the texts in the form of 3D animations, so that learners can feel the content described in the texts more intuitively and deepen their understanding of the texts. AR technology can also be used to carry out language practice activities, such as AR language games, AR situational dialogue, etc., so that learners can improve their language skills in a relaxed and happy atmosphere. Organize an AR language treasure hunt to hide various "treasures" related to language learning in the real environment, and learners need to find these "treasures" by completing language tasks, answering questions, etc.,

and practice language skills during the game (Seiz-Ortiz et al., 2011). There are still some challenges to the application of VR/AR technology in language learning. The cost of hardware equipment, such as high-performance VR head-mounted displays, AR glasses, etc., is relatively expensive, which limits the use of some learners. The comfort and portability of the device also needs to be improved, and wearing the VR device for a long time may cause uncomfortable symptoms such as dizziness and nausea in the learner. Content development is difficult and requires a lot of manpower, material and financial resources, and there are relatively few high-quality VR/AR language learning content on the market, which is difficult to meet the diverse needs of learners. To overcome these challenges, governments, businesses, and educational institutions need to work together to increase R&D investment in VR/AR technology, reduce hardware costs, and improve device performance and comfort. At the same time, content developers are encouraged to actively create more high-quality VR/AR language learning resources and promote the wide application of VR/AR technology in the field of language learning (Bączkowska, 2021).

4.1.2 Integration of Intelligent Speech and Natural Language Processing Technology

The integration of intelligent speech technology and natural language processing technology has injected strong impetus into the cultural immersion and educational effectiveness of online language learning platforms, as shown in Figure 2. Intelligent speech technology mainly includes speech recognition, speech synthesis and other functions, which can realize the process of converting human speech into text and converting text into natural and fluent speech. Natural language processing technology is committed to enabling computers to understand and process human natural language, covering lexical analysis, syntactic analysis, semantic understanding, text generation and other aspects. The organic integration of the two enables the online language learning platform to achieve a more intelligent and personalized learning experience, effectively enhancing the cultural immersion of learners. In terms of real-time feedback, the integration of intelligent speech and natural language processing technology shows significant advantages. When learners are practicing speaking, the platform can capture learners' speech information in real time through speech recognition technology, and use natural language processing technology to analyze the speech content.

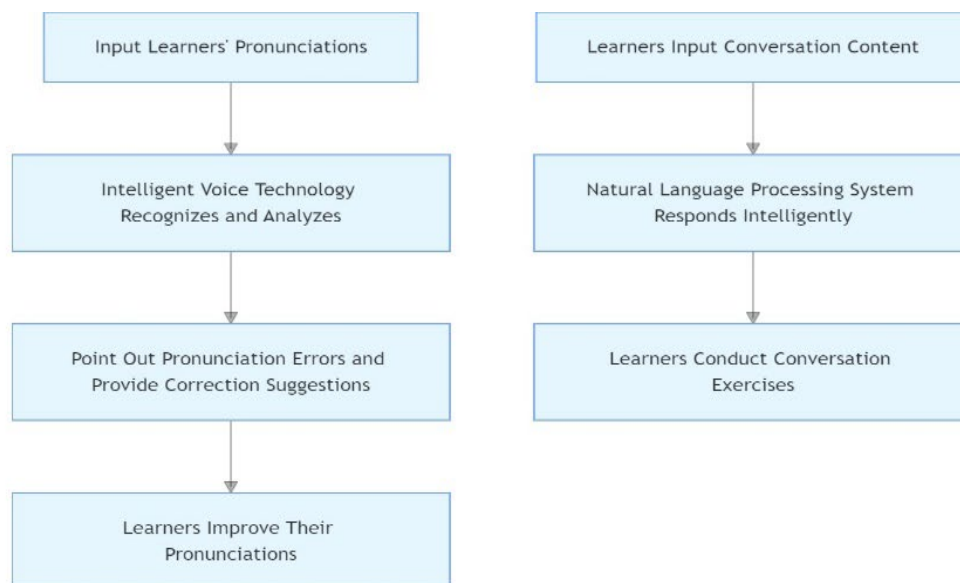


Figure 2: Integrating Intelligent Voice and Natural Language Processing Technologies

Accurately identify grammatical errors, improper use of vocabulary, inaccurate pronunciation and other problems in pronunciation, and give learners detailed feedback and correction suggestions in a timely manner. When the learner says "I goed to the park yesterday." when practicing English conversation, the platform can quickly identify that "goed" is a wrong past tense expression, and the correct form should be "went", and prompt the learner to correct it. This real-time feedback mechanism is like an exclusive language coach who is always by the learner's side, which can help the learner find and solve problems in language learning in time, avoid the solidification of mistakes, and quickly improve the language level. Intelligent conversations are another important application of the integration of the two. The platform can use natural language processing technology to understand learners' questions, instructions and expression intentions, generate natural and fluent responses through speech synthesis technology, and conduct real-time dialogue and communication with learners. When learning Japanese, learners ask the platform "What are some famous traditional festivals in Japan?" The platform is able to accurately understand the meaning of the question and use its rich knowledge reserve and natural language processing capabilities to generate detailed answers, such as "Japan's famous traditional festivals include New Year's Day, Coming-of-Age Day, Cherry Blossom Festival, Obon Festival, Double Ninth Festival, etc. New Year's Day is one of the most important festivals in Japan, and people with activities such as cleaning, eating

Chinese New Year's Eve meals, and visiting shrines." 'This intelligent dialogue function provides learners with a language partner that can communicate at any time, allowing learners to continuously practice their language expression and communication skills in the interaction with the platform, while acquiring rich cultural knowledge and enhancing their understanding and immersion in the target language and culture. In order to achieve more efficient converged applications, it is also necessary to continuously optimize the relevant technologies. In terms of speech recognition, it is key to improve the accuracy of speech recognition in different accents, speaking rates, and language environments. Because learners come from different regions, their accents are different, and the learning environment may be noisy, a large amount of data training and algorithm optimization are required to make the speech recognition model adapt to various complex situations. Deep learning technology is introduced to build a more complex and powerful speech recognition model, and the model's ability to learn different speech features can be improved through the learning of massive speech data Recognition ability. When it comes to natural language processing, improving the accuracy and depth of semantic understanding is crucial. Natural language is rich in semantic and contextual information, and computers are prone to ambiguity when understanding. By constructing a large-scale corpus and knowledge graph, combined with semantic analysis algorithms, computers can better understand the meaning and context of the language, and generate more accurate and reasonable responses. The knowledge graph technology is used to structure the representation of entities, concepts and relationships in the language, so that the computer can obtain more background knowledge when processing the language, so as to understand the semantics more accurately (Condruz–Băcescu, 2013).

4.2 Content Design: Create Learning Resources with Rich Cultural Connotations

4.2.1 Construct a Curriculum System that Integrates Multicultural Elements

Constructing a curriculum system that incorporates multicultural elements is a key measure to enhance the cultural immersion of online language learning platforms. In the design of the curriculum system, the history, literature, art and other elements of the target language country should be deeply explored, and they should be organically integrated into all aspects of language teaching, so that learners can have a comprehensive

and in-depth understanding of the cultural heritage of the target language country while learning the language, as shown in Figure 3.

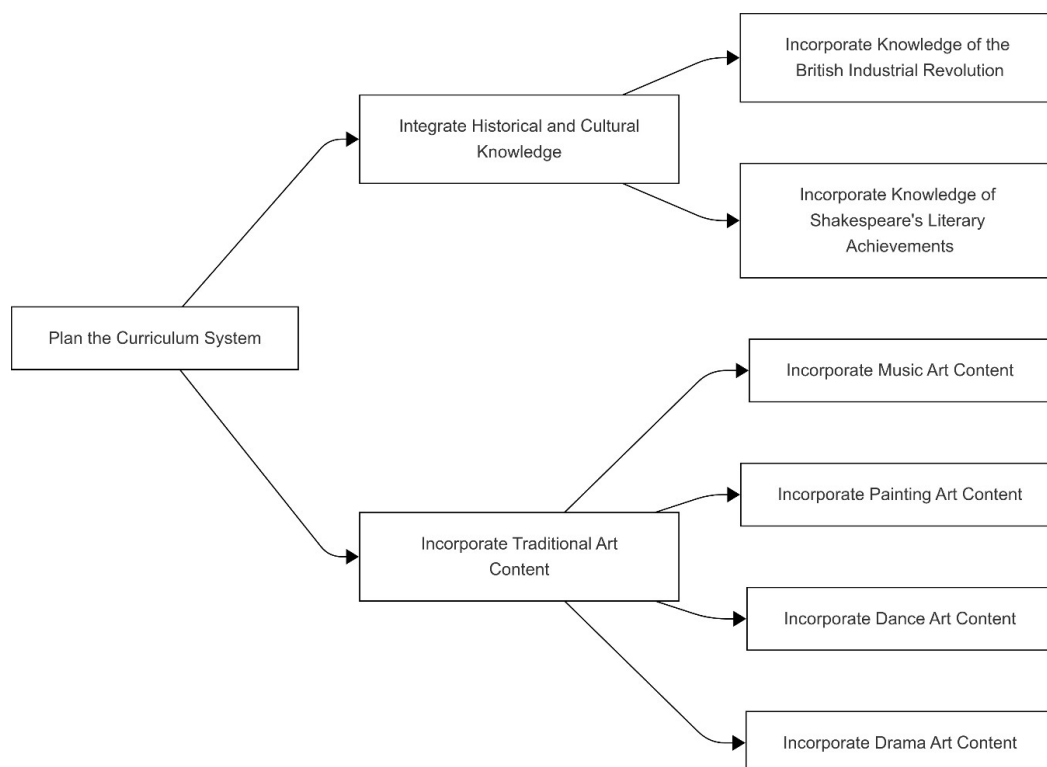


Figure 3: Constructing a Curriculum System Integrated with Diverse

Cultural Elements. In terms of the integration of historical elements, the method of thematic teaching can be adopted. The English course includes a special topic on "British History and Culture", which systematically introduces the major events and important figures in British history and the impact of these historical changes on the English language and culture, from the Roman rule, the Anglo-Saxon era, the Norman Conquest, to the development of modern Britain. The word "checkmate" is derived from the Persian word "shah mat", which means "the king is dead", and by telling the spread and evolution of chess in history, learners can understand the historical and cultural origins behind the vocabulary and deepen their understanding and memory. The integration of literary elements can enrich the humanistic connotation of the course. Select classic literary works from the target language country as teaching materials, such as Shakespeare's plays, such as *Romeo and Juliet* and *Hamlet*, etc., in the English course, and guide learners to read the original fragments and analyze the characters, language characteristics and cultural backgrounds in the works. Organize literary appreciation activities for learners to share their understanding and perception of the works, and discuss the characteristics of the times and cultural values reflected in the works. In this way, learners can not only

improve their language reading and comprehension skills, but also appreciate the unique charm of the literature of the target language country, and improve their literary literacy and cultural appreciation ability. The integration of artistic elements adds aesthetic interest to the course. Introduce art forms such as painting, music, and architecture from the target language countries into the course content, such as introducing Impressionist painting in the French course, displaying the works of Monet, Renoir and other painters, explaining the characteristics, style and creative background of Impressionist painting, and introducing related French vocabulary and expressions, such as "impressionnisme", "couleur", "lumière" (light), etc. By appreciating artworks, learners can more intuitively feel the cultural atmosphere and aesthetic concepts of the target language country, and enhance their perception and understanding of culture. In order to ensure the effective integration of multicultural elements in the curriculum system, it is also necessary to establish a scientific and reasonable curriculum evaluation mechanism. The assessment should not only focus on the learner's knowledge of the language, but also on their ability to understand and use cultural elements. Design culturally relevant assessment questions, such as asking learners to analyse the cultural values embodied in a literary work, or to describe the impact of an art form on the culture of the target language country. Through this evaluation method, learners are guided to pay more attention to cultural learning and promote the improvement of cultural immersion (Nykypporets et al., 2024).

4.2.2 Development of Learning Materials Based on Real Scenarios

Developing learning materials based on real-world scenarios is an important strategy to enhance the cultural immersion of online language learning platforms. Real-life learning materials can provide learners with a language learning environment that is close to life and reality, so that they can use language to communicate in simulated real situations, so as to better understand and master language knowledge and improve their language use ability. Real-life conversations are a valuable source of learning. You can obtain real-life conversations in a variety of ways, such as shooting on-site interview videos, recording conversations in daily life, and collecting real business negotiation recordings. When learning spoken English, provide a recording of a real business negotiation conversation, so that learners can listen to and analyze the language expression, communication skills and business etiquette in the conversation.

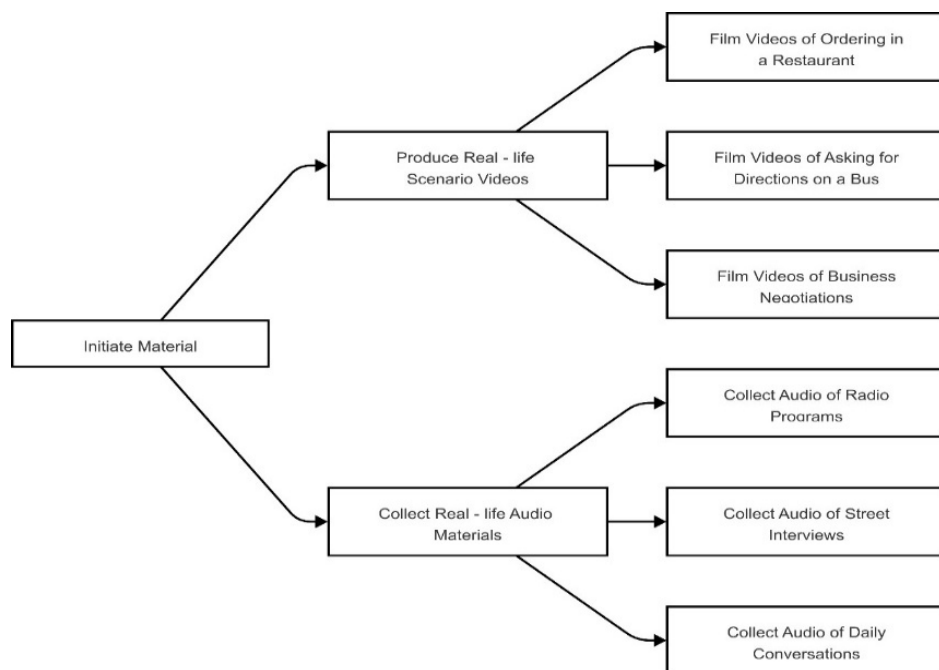


Figure 4: Developing Learning Materials Based on Real - Life Scenarios

Design relevant learning tasks, such as allowing learners to imitate dialogue for role-playing, or conducting business negotiation simulation exercises based on the content of the dialogue, so that learners can improve their business oral expression skills and ability to cope with actual business situations in practice. Real-life videos are also an important source of learning material. Create videos that cover multiple scenes such as daily life, work, socializing, and travel in the target language country, such as videos showing foreigners ordering food in restaurants, taking public transportation, attending social gatherings, visiting places of interest, etc. In the video, the language learning content is naturally integrated, including vocabulary, phrases, sentence patterns and grammar knowledge, accompanied by vivid pictures and real sounds, so that learners can intuitively feel the use of the target language in real scenarios. After watching the video, set up relevant learning activities, such as answering questions in the video, describing the scene, discussing the cultural phenomena reflected in the video, etc., to deepen learners' understanding and memory of the video content and improve the language learning effect (Li, 2021). Real-world audio is also indispensable. Record audio in real scenes, such as radio programs, movie clips, speech recordings, etc., so that learners can get in touch with authentic language expressions by listening. When learning Japanese, the audio of the news program of the Japanese radio station is provided, so that learners can listen to and learn about the current affairs news in Japan, and at the same time learn the Japanese vocabulary and expressions commonly used in news reports. Design

listening practice tasks, such as fill-in-the-blank, choice, dictation, etc., to help learners improve their listening comprehension skills. In order to allow learners to better understand the audio content, corresponding written materials and cultural background introductions can also be provided to assist learners in learning (Osipov et al., 2015). When developing real-world learning materials, it is necessary to pay attention to the diversity and authenticity of the materials. Diversity is reflected in the richness of the scene and the diversity of language expression, which meets the learning needs and interests of different learners. Authenticity requires that the material be as close as possible to the real scene, avoiding artificial fabrication and deliberate design, so that learners can be exposed to the most authentic and natural language and culture. The difficulty of the material should be reasonably graded according to the learner's language level, from simple to complex, and gradually improve the learner's language ability.

4.3 Social interaction: Build an Immersive Language Learning Community

4.3.1 Establishment and Operation of Online Language Exchange Communities

Building an online language exchange community is an important measure to enhance the social interaction and cultural immersion of online language learning platforms, as shown in Figure 5. An active and orderly language exchange community can provide learners with rich communication opportunities, promote interaction and cooperation among them, share learning experiences and cultural insights, and create a strong language learning atmosphere.

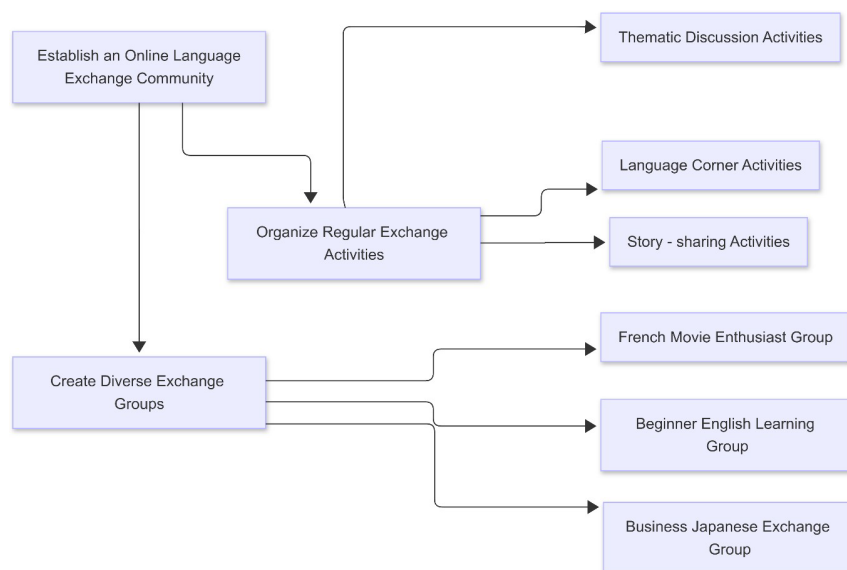


Figure 5: Building an Online Language Exchange Community

When building an online language exchange community, we should first pay attention to the rationality and convenience of functional design. The community should have a variety of communication functions, such as forums, chat groups, voice calls, video conferences, etc., to meet the communication needs of learners in different scenarios. The forum is an important communication platform in the community, where learners can post their learning experiences, ask questions, and share learning resources. Different sections are set up, such as grammar learning, vocabulary accumulation, oral practice, cultural exchange, etc., so that learners can communicate according to their own interests and needs. Chat groups can be categorized according to language level, learning goals, hobbies, etc., such as beginner English learning groups, business Japanese exchange groups, anime lovers French groups, etc., so that learners can have more targeted communication with like-minded people (Salih & Omar, 2021). In order to encourage learners to actively participate in community interactions, effective incentives also need to be established. Establish a point system, learners can get corresponding points for posting high-quality content, answering questions, participating in discussions, etc., in the community, and the points can be exchanged for learning materials, virtual prizes, or offline activity opportunities. Set up leaderboards, such as active user rankings, contribution value rankings, etc., to commend and reward the top learners, and stimulate learners' sense of competition and enthusiasm for participation. Carry out a variety of interesting community activities, such as language learning challenges, cultural knowledge competitions, oral competitions, etc., to provide a platform for learners to show themselves, and at the same time enhance the cohesion and activity of the community. Running an online language exchange community requires a professional team and scientific management methods. Community managers should be responsible for maintaining community order, promptly handling negative information and violations, and ensuring the healthy development of the community. Regularly organize online lectures, live courses and other activities, invite language experts, foreign teachers or excellent learners to share their learning experience and skills, and provide professional guidance and assistance to learners. Pay attention to learners' needs and feedback, continuously optimize community functions and services based on their opinions and suggestions, and improve learners' satisfaction and loyalty. Through regular questionnaire surveys and user feedback collection, we can understand learners' views and needs for the community, adjust operation strategies in a timely manner, and improve the quality and effectiveness of the community.

(DIUHOVANETS, 2024).

4.3.2 Group Cooperative Learning and Cultural Project Practice

Organizing group cooperative learning and cultural project practice is an effective way to enhance the cultural immersion and educational effectiveness of online language learning platforms, as shown in Figure 6. Group cooperative learning can promote communication and cooperation among learners, and cultivate their teamwork and communication skills. The cultural project enables learners to apply the language knowledge they have learned to the real world, deeply experience the target language and culture, and improve their intercultural communication skills.

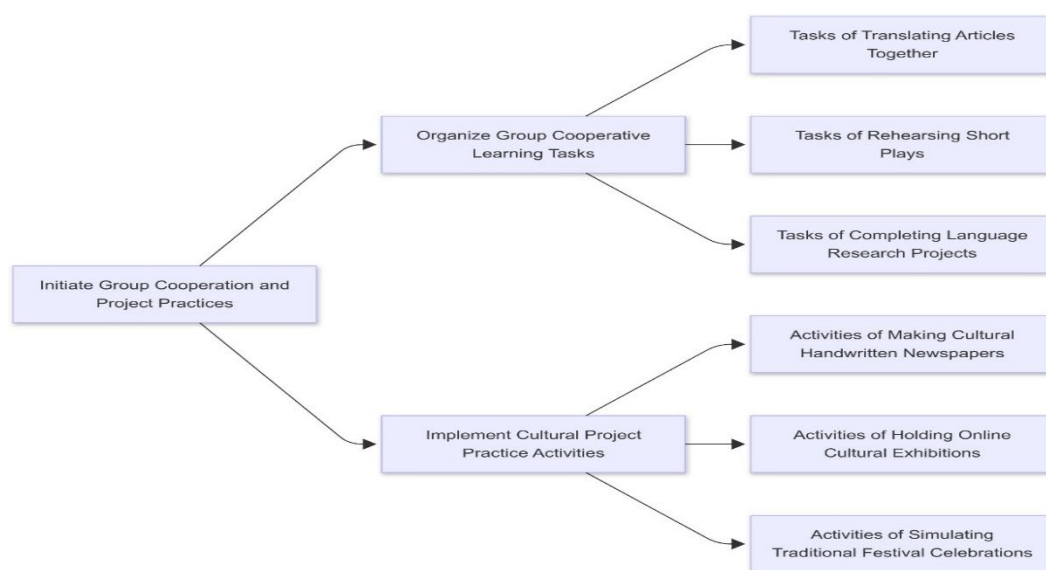


Figure 6: Carrying out Group Cooperative Learning and Cultural Project Practices

In terms of group cooperative learning, the platform can group learners according to factors such as language level, learning goals, and hobbies, so as to ensure that the members of the group have a certain diversity and complementarity. Each group is assigned a clear learning task, such as completing a language report, preparing a speech, conducting a language survey, etc., so that learners can discuss and learn from each other in the process of cooperation. When learning to write in English, group members can work together to collect information, write the first draft, revise and polish, and finally work together to complete a high-quality English essay. Through this kind of cooperative learning, learners are not only able to improve their language writing skills, but also learn how to use their strengths in a team and collaborate with others to complete tasks. In the process of cooperation, teachers should play a guiding and supervisory role. Regularly check the learning progress of the group, give timely guidance

and feedback, and help learners solve the problems they encounter. Organize communication and sharing activities between groups, so that each group can show their learning results, learn from each other and inspire each other. Conduct group cooperative learning experience sharing meetings, invite outstanding groups to share their cooperative experiences and learning methods, and promote the learning and progress of other groups. Through such communication and sharing activities, learners can broaden their horizons, learn different learning methods and ideas, and improve their learning effectiveness (Liu et al., 2020). The cultural project practice provides learners with the opportunity to experience the target language culture in depth. The platform can design a variety of cultural projects, such as organizing online cultural exchange activities, conducting cultural theme research, and producing cultural display works. Online cultural exchange activities can invite native speakers or people familiar with the target language and culture to participate in interactive exchanges with learners and share their cultural customs, lifestyles, values, etc. Learners can learn about the real face of the target language and culture in communication, and improve their intercultural communication skills. Carry out cultural theme research activities, so that learners can independently choose the cultural topics they are interested in, such as traditional festivals, music and art, food culture, etc. in the target language countries, conduct in-depth research through consulting materials, interviews, field trips, etc., and finally form research reports or display works. In this process, learners can not only learn a wealth of cultural knowledge, but also exercise their research and language skills (Lee & Roger, 2023). The production of cultural display works is also a creative and interesting way to practice cultural projects. Learners can work in small groups to produce videos, posters, PPTs and other presentations related to the target language and culture to demonstrate their understanding and perception of the target language and culture. To create a video about Japanese anime culture, group members can collect information on the development of Japanese anime, representative works, anime styles, etc., edit and produce it, and finally display and share it in the community. Through such cultural project practice, learners can have a deeper understanding of the target language and culture, enhance their sense of identity and interest in culture, and improve their ability to use language comprehensively.

4.4 Case Study

In order to explore the application effect of innovative strategies in

online language learning platforms, Duolingo and HelloTalk were selected for case studies, as shown in Figure 8. Duolingo is a well-known comprehensive platform known for its rich curriculum, diverse learning styles and strong technical support. HelloTalk is a typical social platform, which stands out with its unique social interaction and language exchange model. Founded in 2012, Duolingo is the world's most downloaded foreign language learning app with over 500 million users. The platform offers more than 40 language courses covering all stages of learning, with rich content, integrating multi-section knowledge and using a variety of teaching methods to stimulate interest in learning. Use self-developed AI models to personalize learning content recommendations and improve learning efficiency.

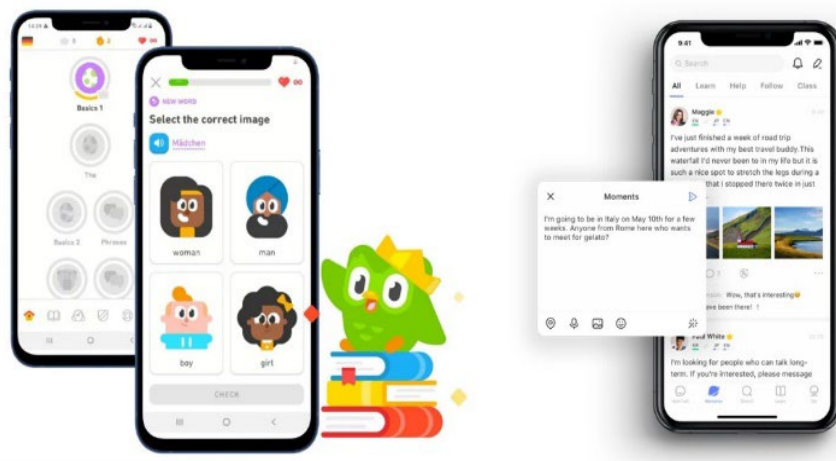


Figure 8: Online Language Learning Platform

HelloTalk is a social platform that supports communication and learning in more than 150 languages, and is highly socially interactive. Users can communicate with global learners in real-time in a variety of ways, with language exchange capabilities. The platform also has social functions such as adding friends, which is convenient for learners to establish a social circle and make progress together. Duolingo uses VR technology to create a virtual language environment that allows learners to complete language tasks and experience the culture in a simulated scenario. Integrate intelligent speech and natural language processing technology to achieve real-time feedback and intelligent dialogue, and support oral practice and cultural question answering. The curriculum system integrates multicultural elements and develops real-life learning materials to enhance practicality and authenticity. HelloTalk builds an online language communication community and sets up multiple communication sections to meet different needs. Organize group cooperative learning and cultural project practice activities, and users can join groups according to their interests and goals

to complete tasks together. Cultural events are also held from time to time to enhance the user's experience of the target language and culture. Language proficiency tests, questionnaires, and data analysis of learning behavior were used to evaluate the effectiveness of innovative strategies. Learners who use innovative strategies on the Duolingo platform have significantly improved their language proficiency in all areas; Learners who participated in innovative activities on the HelloTalk platform improved their oral communication skills by about 30%. The questionnaire survey shows that learners on the two platforms are highly satisfied with innovation strategies and their learning enthusiasm is enhanced. Behavioral data analysis showed that learners had improved learning duration, frequency, and community activity. Successful experience of implementing innovation strategies across both platforms: technological innovation is key to improving learning, such as Duolingo's VR and intelligent voice technology; Content optimization can attract learners, like Duolingo's multicultural curriculum system; Enhanced social interaction fosters learning, such as HelloTalk's community and group activities. However, there are also problems, such as VR technology causing discomfort to some learners, errors in intelligent voice technology, insufficient excavation of content for niche cultures, slow updates, and bad behaviors and "free-riding" phenomena in social interactions (Usai et al., 2017).

5. CONCLUSIONS

This study deeply explores the innovative strategies for creating cultural immersion and improving the educational effectiveness of online language learning platforms, and obtains a series of valuable research results through theoretical analysis, analysis of the current situation, strategy proposal and case verification. At the theoretical level, this paper systematically sorts out the relevant theories of online language learning, and clarifies the development status and characteristics of the current online language learning platform. At the same time, the problems and challenges existing in the creation of cultural immersion and the improvement of educational effectiveness of the platform are pointed out, such as the lack of depth and breadth of cultural content, the traditional teaching mode, and the poor interactivity, which provides a realistic basis for the formulation of follow-up targeted strategies. In view of the existing problems, a series of innovative strategies were proposed from two aspects: the creation of cultural immersion and the improvement of educational effectiveness. In

terms of cultural immersion, emerging technologies such as VR/AR technology, intelligent speech and natural language processing technology are used to create an immersive learning environment. Construct a curriculum system that integrates multicultural elements, develop learning materials based on real scenarios, and enrich learning resources; Build an online language exchange community, organize group cooperative learning and cultural project practice, and enhance social interaction. In terms of improving the effectiveness of education, the diagnosis of learning situation is carried out based on big data analysis, and the adaptive learning system is applied and optimized to achieve personalized teaching. Design a variety of interactive teaching activities, improve real-time feedback and learning evaluation mechanisms, and stimulate learning enthusiasm and participation; Change the role of teachers, change from knowledge imparters to learning guides, improve teachers' professional quality, and strengthen the construction of teacher training system. Taking Duolingo and HelloTalk as two online language learning platforms, this paper analyzes the practice and implementation effect of innovative strategies in practical application in detail, and provides reference and inspiration for other online language learning platforms.

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