The Use of Multimedia in English Classes as a Means of Increasing Student Motivation

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Abstract

The relevance of the study is conditioned upon the fact that in modern society the use of information technology tools is an important aspect that predetermines the work of many areas of human activity. Currently, multimedia has many advantages in teaching English as it offers more information, saves time, and stimulates imagination and creativity. It enriches the education process and can make it more effective by increasing students' interest. In this regard, this paper is aimed at considering the process of using multimedia means to learn a foreign language. The leading methods used to investigate this problem were analysis, classification, deduction, synthesis, generalisation, and natural experiment, which helped research the influence of information and technological data on students' achievements. The study covered the general concept of multimedia and its need for teaching English; showed the use of websites, programs, electronic dictionaries, and videos for learning English on the Internet; demonstrated the influence of multimedia technologies on modern language teaching methods; described the features of using the multimedia for language learning; analysed the relevant literature and covered the main principles for the effective introduction of media resources to learn English; identified the advantages and problems of using multimedia in education; diagnosed the data on the success of university students and their level of motivation when working with information technology and multimedia; considered strategies for using multimedia technologies and data in education. The materials of the present paper are of practical and theoretical value for educators, teachers, professors at universities, media psychologists, sociologists, translators, psychologists, and employees of educational organisations who will be able to develop methods and ways to improve students' motivation based on the use of media technologies and information data.

Keywords: modern technologies, education process, linguistics, methods and approaches, education informatisation, interest

1. Introduction

The rapid development of information and technologies in the modern world is provided by advanced learning means – multimedia. The introduction of multimedia technologies in the education process is a key moment in education informatisation. Currently, multimedia technologies represent a promising and rapidly developing area of information technology. Today, there is a growing need for education modernisation, and therefore it is important to reform multimedia teaching courses so that conventional education is changed into modern teaching of English. Z. Zhen (2016) believes that multimedia technologies will be used to teach not only English but also other disciplines. The scientist notes that multimedia stimulates and supports thinking processes. Multimedia comprises various components: text, graphics, animation, sound and video, which can contribute to learning in different ways (Torybaeva, 2013). It is important to understand that multimedia plays only a supporting role in teaching English.

F. Atiku (2021) noted that COVID-19 forced educational communities to switch to online learning. As a result, teachers and students faced many issues. The pandemic influenced the demand for innovative technologies in education. It was multimedia that managed to combine several levels of learning into an educational tool. Multimedia technologies are flexible and can be adapted to individual learning styles. L. An and G. Zhang (2021) investigated the current state, advantages, and disadvantages of using multimedia to teach the English language. Scientists have proven that it is important to combine multimedia learning and conventional teaching practices. It was also noted that multimedia compensates for the lack of a language environment in real life on many topics, as it combines sound, shape, colour, movement, and statistics. Multimedia tools satisfy the psychological needs of students and help optimise the lesson time. Using multimedia technologies, students can boost their interest and motivation, while the teacher will have an easier time stabilizing the atmosphere in the group and expanding the channels for students to learn knowledge, which should improve the quality of English teaching and students' productivity (Bazaluk et al., 2017).

In the era of Big Data and the development of the teaching of English, the problem of developing a variety of materials, resources, and a vast amount of data arises (Sartbekova et al., 2021). Xiao-Pang G.N. Vivekananda and K. Shailesh (2021) noted that multimedia education is of immense importance in modern education, and therefore, when training English teachers, attention should be paid to studying the criteria and basic operations of digital education in combination with modern technologies. Scientists have identified the

multimedia disadvantages as follows: cost (it is more expensive than other types of information production); availability of electronic equipment and a certain kind of knowledge. This paper suggested a multimedia-based English language teaching model that uses networks to solve resource security and hardware capability issues in colleges and universities. The suggested learning model can awaken students' interest in learning and improve their practical skills.

A. Ghanizadeh and A. Razavi (2015) investigated the effectiveness of using multimedia elements in teaching English in public schools. The experiment results showed that the use of multimedia elements in education can positively influence students' performance and increase their motivation level upon completing their learning goals. Students tended to strive to achieve their goals. Therefore, the introduction of multimedia in the teaching process is an important task.

The present study is relevant since multimedia is an information technology that plays a key role in the informatisation of education. It is these media that can optimise the education process and influence progress in many areas of professional activity, science, art, etc. However, despite its importance, the process of its influence on an individual's motivation has not yet been accurately described. Having high motivation, a student can obtain qualitative training, which should be built on the purposeful use of the educational potential of multimedia information resources. That is why it is important to investigate the issue of the specific features of motivating the students' behaviour when working with multimedia data (Sidorenko, 2021).

The purpose of this study was to cover in detail the process of using multimedia means to teach English. Other issues important for analysis included the description of the focus of the relevant methods on the development of positive motives and the identification of the advantages and disadvantages of multimedia in education.

2. Materials and Methods

The following methods were used in this study: theoretical methods (investigation and analysis of pedagogical, psychological, educational, methodological literature on the subject under study to determine its relevance; the analysis of the features of using the multimedia in education; generalisation of theoretical material on the subject under study; deduction when comparing approaches and materials to investigate the methods of introducing multimedia technologies into education and their influence on the individual's motivation, their cognitive and linguistic skills; classification of the positive aspects of media technologies and information resources in education; diagnostic (investigation of resources in multimedia education programs, questionnaires, and conversations with students to identify the effectiveness of introducing multimedia in educational institutions); empirical (monitoring the level of motivation and interest of students in universities of Kazakhstan; pedagogical experiment in natural conditions to investigate the ways in which the information is perceived during classes); methods of graphic results representation to demonstrate the students' motivation level.

The experimental study was conducted at L.N. Gumilyov Eurasian National University and Abai Kazakh National Pedagogical University (287 students of "Foreign Philology (Western Languages)", "Philology" and "Translation Studies (Western Languages)" programs). The problem was investigated in three stages. The first stage involved collecting theory and analysing the current approaches in pedagogy, psychology, and information sciences regarding the problem of investigating multimedia and other technologies in the education system; the works of scientists covering this issue, its features and approaches to explanation were examined; the information data of books, educational programs, dissertations, articles, monographs, conferences were considered, where the features of the use of multimedia in teaching a foreign language are profoundly and comprehensively covered; the supporting role of multimedia in learning was presented; the positive influence of multimedia technologies on student achievement was demonstrated; the main components of these funds were determined; the relevance of the study was justified; conclusions were drawn from the studies of scientists; the problem, purpose, forms, and methods (ways) of investigating this problem were distinguished; a plan for conducting an experimental study was drafted.

The second stage involved a study of the use of multimedia in English classes as a means of increasing students' motivation; the introduction of software in the education process was considered; the types of multimedia and their main advantages and disadvantages were analysed; the main principles of multimedia learning were shown; the resources of multimedia education programs and ways of perceiving information were diagnosed; an experiment was conducted that helped identify the students' motivation level when using multimedia technologies in universities in Kazakhstan; the results of the pedagogical work were justified and principles and methods for improving the use of multimedia in education were suggested; the conclusions obtained during the experimental study were systematised.

The third stage systematised and classified the material obtained during the analysis of the use of multimedia in English classes as a means of increasing students' motivation; theoretical, practical conclusions, and results of the study were substantiated; a comparative analysis of studies and approaches to the study of this problem, experiments of scientists involved in considering the problem of introducing multimedia and information resources into the process of teaching English were presented; the experiment results of other teachers, linguists, psychologists were summarised and logically presented; the importance of a multimedia model of teaching English, which is student-oriented and effectively combines conventional learning and a variety of media resources; the relevance of the use of multimedia technologies at all levels of the modern education system was analysed and proved.

3. Results

Multimedia in education. The use of information technologies and multimedia in education can radically change the existing education system, making it more efficient and effective. The organisation of the educational process will be filled with innovations, as analytical, practical, and experimental principles will be widely used in teaching, which allows for finding an approach for each student. Multimedia

technologies are one of the most promising and popular educational information technologies. These technologies help improve the education process by creating a range of images, texts, and data, accompanied by sound, video, animation, and other visual effects based on an interactive interface and other control mechanisms. Currently, the education system creates a vast amount of software to improve the education process. The main innovations are databases, a traditional information system, a repository of any kind (including a graphic one), computer training programs, etc. The use of multimedia offers many opportunities for students, especially for their independent work. In addition, such technologies can provide flexibility in changing the class schedule. As a result, a teacher will be able to use new teaching methods, technologies, and resources (Ismoilov, 2021).

The main types of multimedia include technologies such as an interactive whiteboard, a multimedia screen, an interactive survey system, network educational programs, diagnostic complexes, and simulation technologies. The advantages of using multimedia in the educational process are as follows:

– the integrated use of multiple channels of perception helps to better perceive information, as it is delivered by various senses;

– the availability of visualisation of objects and processes;

– the visual presentation of abstract information;

– the creation and conducting of complex and dangerous experiments in a virtual environment;

– the ability to positively influence the development of cognitive structures in students, since educational material is presented in a broad educational, social, and historical context.

Other positive aspects of the use of media technologies and information resources in education are as follows:

– the creation of new specialized academic disciplines that are related to computer science and information technology;

– the changes in the system of conventional disciplines based on the introduction of a creative approach to learning;

– the development of an integral learning environment;

– the perfection of methods and technologies forming the education system;

– the development of innovative ways of interaction in the education process for added students' motivation;

– the change in the student's engagement and teacher's activity;

– the improvement of teaching effectiveness through individualisation and differentiation with motivational techniques;

– the improvement of the education management mechanisms to maximise the informativeness of classes (Kralina, 2019).

Rational use of multimedia courses in the classroom will help increase students' cognitive ability by scaling such programs. In addition, multimedia design compensates for the lack of a language environment in real life, as it combines sound, shape, colour, movement, and statistics. The course software itself is developed beforehand and thus helps reduce the time spent on writing long sentences or unfamiliar words on the board. As a result, the time saved can be used for other activities and games during classes, and students have more time to think and practice than with conventional teaching methods (An & Zhang, 2021). However, multimedia tools in education also have disadvantages, since it is difficult for a student to concentrate on the learning material as they are often distracted by diverse types of information. Furthermore, the use of such data often prevents students from taking part in real practice and conducting experiments with their own hands. In addition, the individualisation of learning makes students more closed and insecure, which hinders their socialisation. A student cannot get enough practice in a distance form of education and learn to form their thoughts in a professional language.

The students' motivation level when using multimedia. The main results of the study lie in the identification of the student's motivation level when using multimedia technologies. The study was conducted at L.N. Gumilyov Eurasian National University and Abai Kazakh National Pedagogical University. The participants were students of 1–4 courses who studied the programs of "Foreign Philology (Western Languages)", "Philology", and "Translation Studies (Western Languages)". The sample group consisted of 287 students. The results were determined based on a natural experiment and a questionnaire regarding the students' motivation level during learning. The method of observation was used to investigate the process of using multimedia in teaching English in universities in Kazakhstan. The results of the study were obtained through the use of multimedia in different classrooms. The main observation aspects included multimedia means used by teachers in different classrooms, the quality of multimedia software, the effect of such lessons, and feedback from students to teachers and classmates. With the development of society and the economy in the world, there is an acute need for an increasing number of people who are fluent in English. Thus, multimedia is increasingly being used in education for fast and effective results. Currently, teachers need to know the principles and features of the combination of multimedia learning and conventional learning according to the teaching practices in universities and higher education institutions.

With the technological advance and the beginning of the digital revolution, teachers of English have begun to think more about effective ways to create a better teaching environment and motivate the learning of foreign languages. This became the advent of the use of multimedia technologies. They are the optimal and effective solution to achieve lesson goals. Here, three aspects should be distinguished: educational (students' perception of educational material, awareness of connections); developing (the development of cognitive interest among students, their skills to analyse, and compare); upbringing (instilling the scientific worldview, moral qualities of students, and their ability to work independently). The basic principles of multimedia learning are as follows: scientific principles (the absence of errors);

added principle in the use of multimedia; interactivity principle (more interaction between teachers and students); and combined principle (combination of diverse types of learning) (Zhen, 2016).

The use of multimedia technologies is a vital part of the educational and methodological complex. The authors of the study have proved that these technologies boost the students' motivation and contribute to the development of students' cognitive abilities. The effectiveness of work in such an environment is built on the fact that the education process, controlled by the teacher, covers all students. The lesson structure stays unchanged when using multimedia technologies, but the motivating part occupies a larger share. This is a necessary condition for the success of learning, as it develops the imagination and emotions of students (Chernous, 2019). Teachers face challenges to keep students motivated and improve their academic performance. Currently, conventional methods can no longer meet the needs of society and the education system. Students will better master information using intelligent multimedia technologies. This will help them feel motivated and enjoy the education process. The educational system uses diverse multimedia technologies such as digital storytelling, virtual reality, augmented reality, mobile applications, interactive websites, computer games, and QR codes. Such an environment can make the teaching and education process more interesting and effective, while the approach itself will increase the students' achievement and make classroom work more dynamic. The authors have proven that multimedia teaching of English will help improve students' listening skills and their ability to speak, increase their enthusiasm for learning the language and develop their ideas (Sourav et al., 2021).

While working with multimedia, students showed a prominent motivation level, as elements of creativity and self-reflection were often manifested, and additional reserves of personality were included. Students wanted to learn about the various aspects of the English language in greater detail, including its history, phonetics, stylistic features, etc. The use of multimedia tools also provided insight into the culture of another country and encouraged students to learn more about the origin of the language. The students improved their listening skills and obtained the cultural vision of the target language using multimedia technologies. This contributed to a better learning of the material and active engagement in the education process. The study results are presented in the diagram below (Figure 1).
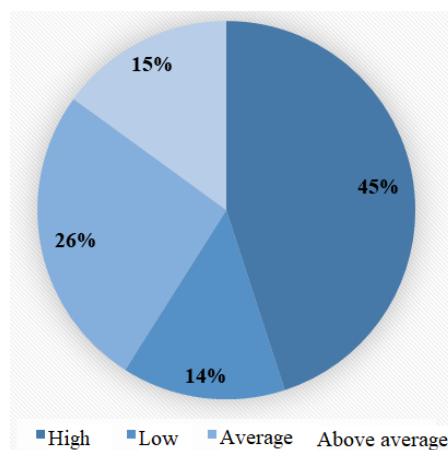

Figure 1. The students' motivation level when working with multimedia

Source: prepared by the authors.

Furthermore, students quickly learned the material and had a desire to receive more tasks. They also often took supplementary online courses that helped them understand the topic better. Analysing students' questionnaire data, it can be concluded that the multimedia education programs contained the following resources: 20% of simple texts, 66% of images and texts, and 14% of video and audio content. The negative part is that not all teachers had sufficient proficiency in multimedia theory and multimedia technologies. Multimedia tools were predominantly used in open classes, which are a rare occasion. Younger teachers paid much attention to the production of multimedia-based educational materials that helped students raise their expectations and interest in English classes (An & Zhang, 2021). Notably, students mainly rely on auditory learning to get 16% of knowledge, while visual perception gives 26% of information. However, with a successful combination of such resources, the successful understanding of the material reaches 65% (Hu & Yao, 2021). Thus, it is important to use listening, pictures, videos, video footage, and other network video materials in teaching. It is also common for teachers to use films as a learning resource, as they combine text, image, sound, background culture, and other elements. Due to multimedia tools, students can understand authentic Western culture with a clean accent, which expands their knowledge and vocabulary. Multimedia technologies have distinctive characteristics such as visibility and brightness. When teaching English, teachers use sounds and images to increase students' activity and motivation. Often, images, photographs, and graphics helped communicate effectively and aroused interest in the topic from the very beginning of the lesson. Students were able to visualise different situations as early as the initial stage of the lesson, which contributed to their academic success and improved academic performance.

Principles and methods for improving work with multimedia in the educational space. Educational institutions should provide pupils and students with the level of knowledge that modern society demands. It is important to improve the use of multimedia in education through

the following principles:

1. Development of the proper understanding about multimedia education. It is important for teachers to develop proper understanding of multimedia learning in students and learn how to use multimedia technologies effectively. Teachers should properly understand the multimedia learning theory to use its benefits in full. When teaching English, multimedia can help students delve into another communicative environment and understand the culture of another country, while developing a communicative competence.

2. Teachers should be able to teach based on a variety of information. It is important for teachers and professors to learn how to use the latest software to create courses. The drawback is that some cannot even use basic software, flexibly and quickly find materials to create courses. Furthermore, it is important for teachers to know the process of physiological and psychological development of students to control and analyse their learning process and use materials with maximum effect.

3. Focus on people, their mental space in multimedia education. When using multimedia, it is important to understand the role of teachers and students. The learning model should be focused on ensuring that student's express interest in conducting studies and experiments (An & Zhang, 2021).

Thus, multimedia helps influence the effectiveness of learning and optimise the development of students. An important purpose is also the use of artificial intelligence as a learning tool.

4. Discussion

With the rapid development of information technologies in the education system, more attention has been paid to the use of multimedia learning resources. The authors revealed the importance of multimedia-based teaching of English and showed the problems in the management of multimedia-based teaching in educational institutions. Ways and methods to improve multimedia tools have also been suggested. This article presented the statistical information and types of multimedia that were used in the education process. The level of students' motivation when using multimedia technologies was also diagnosed. L. Hu and W. Yao (2021) investigated the use of multimedia and information resources to teach English listening comprehension. The main purpose was to create realistic and lifelike scenes for students in the classroom so that they could understand different situations and dialogues by ear. When developing resources for teaching English in an information and educational environment, teachers often use role-playing games, they can present important questions using multimedia networks. In addition, students can practice oral English in the form of discussions and debates, using different vocabulary notes. The use of multimedia in the development of learning resources for reading in English is based on the introduction of visual and dynamic images or videos connected with the content, which helps understand and master new knowledge by integrating new and old knowledge (Skliarenko et al., 2019).

Multimedia allows the students to improve their skills and stimulate interest in learning. For example, teachers often use videos to improve students' writing skills. Scientists have shown that multimedia-based teaching of English in universities and colleges is based on the fact that students master multimedia resources according to their individual needs (Tserklevych et al., 2021). The system also includes services for recommending multimedia resources and their online viewing. Notably, the multimedia system for teaching English is designed so that each student can choose what they like or what suits them best. Educational institutions often create a classification system for multimedia English-language resources based on the education program. A major step is to prepare a backup program to solve the problem of resource loss. It is teachers and educators who will support the maintenance of multimedia resources, including downloading, removing, and editing (Tusseyev et al., 2021). The data provide additional information for the research on new educational programs based on multimedia technologies.

L. Liang (2022) investigated the use of multimedia technologies in all areas of life and education in China. Their high interactivity, efficiency, and dynamism have been proven to be an important aspect of introducing them into the process of teaching English in colleges and universities. The study considered the model based on a web environment and a multimedia environment. The mechanism was based on a decision support system regarding the use of various educational resources, which helped in the development of an interactive teaching environment. In addition, scientists were offered some suggestions to improve the efficiency of the learning process in the online and multimedia environment. This study states the importance of using media resources and new learning models to help improve this system in Kazakhstan. According to W. Deng and L. Wang (2021), the multimedia model of teaching English is student-oriented and effectively combines conventional teaching and network resources. Here, not only the leading role of teachers is important, but also the initiative from students, which improves their ability to listen and speak. P. Sang (2019) also briefly presented the prominent position of multimedia computer learning as a method to improve the communication skills of students and increase their level of motivation to learn a foreign language. This information supplements the results obtained during the study.

P. Li, Y. Ning, and H. Fang (2021) concluded that with the gradual progress of reforms in the education area, learning English is becoming increasingly important, while effective and fast learning has become an important problem in society. In the scientists' study, an online translation platform based on artificial intelligence was presented. The program used the word ranking method in combination with data processing technology. After synchronisation and data compression, the translated text was displayed in audio and visual forms. The study results show that the use of artificial intelligence and multimedia increases the speed of students' cognitive work during text translation. Such an optimised request algorithm will help improve the efficiency of learning English and save time, which can increase users' enthusiasm for learning English. This technology can be used to increase the student's motivation and form their interest.

A. Haryudin and F. Imanullah (2021) determined the ability to implement online learning and use multimedia, showed difficulties in online learning and providing multimedia learning. The scientists diagnosed that in school, multimedia was often used in high school (up to 75%) and junior classes of secondary school (25%). The questionnaire showed that all teachers were familiar with such technologies. Approximately 62% of respondents always use multimedia (video or audio) in their teaching, and 25% of teachers stated that they sometimes use such media. The negative part was that almost 13% rarely use multimedia and face difficulties in online learning. The main problems are managing the class, time management, and working with software. The difficulties of using multimedia are network outages, the complexity of operating software and application systems and the instability of power sources, which often fail and slow down online learning (Nurmaganbetova et al., 2020). Such results will help identify the main issues in the use of multimedia and successfully solve them. D. Leutner (2014) described cognitive and affective learning processes involving the use of multimedia. Their article provides valuable information on the terms "situational interest", "positive emotions" or "confusion", which affect students' cognitive processing and motivation. These data are important for understanding the study on students' motivation.

German scientists H. Astleitner, I. Pasuchin, and C. Wiesner (2006) presented an extended model of motivational multimedia learning. The created model combines two types of data related to the management of mental resources (attention, commitment, monitoring) and motivational processes (aspiration and activity control). It was noted that motivational processes affect attention, and the possibility of achieving a certain purpose increases concentration (Bazaluk, 2019). Furthermore, attention helps control actions and influences motivational processes. These results indicate a direct connection between the use of multimedia and the level of students' motivation. R.A. Berk (2009) described the need to create clear criteria that should be considered when using multimedia to motivate students: student characteristics, offensive topics and video structure. The first set of criteria implies social and demographic characteristics: age or class, gender, ethnicity, and language. The second set of criteria concerns the possible type of insults in the video according to the categories of students or pupils: humiliation or mockeries on race, gender, profession, etc. A teacher should make every effort not to use material that could even potentially be offensive. Finally, the video structure should be suitable for educational use. Important criteria are the length of the video clip, context, availability of visual clues and the number of characters. The scientist's work indicates that the use of multimedia should be based on certain principles and selection criteria.

D.C. Moos and E. Marroquin (2010) considered the process of computer learning, which allows the creation of a visually enriched and interactive environment. This study examined the role of theoretically based motivation constructs in the context of three popular computer learning techniques: multimedia, hypermedia, and hypertext. Empirical studies were conducted that examined the influence of these technologies on motivation and the learning process in the context of these environments. The results obtained are of informative value for the study. Thus, the use of multimedia in pedagogical practice is an innovation that can improve teaching effectiveness. Multimedia technologies are only a supplementary teaching method. They help students to better understand and master the educational material by increasing their motivation at the initial stage. It is important to combine multimedia and teaching scientifically and organically to avoid the negative outcomes of these media.

5. Conclusions

Thus, currently, multimedia means are an important part of the educational process, as they enable the teacher to provide the material in different ways. Notably, multimedia can combine diverse types of material: teaching, training, and textual. They help immerse in the language environment without physical actions, develop independence and provide an opportunity to control the work pace. Multimedia helps optimise the teaching and educational process, and involve students in it as subjects of the educational process, which contributes to the development of their creativity, independence, and critical thinking. The use of computer technologies also allows for differentiating educational activities and activates the cognitive interest of students and their creative abilities. Furthermore, the Internet virtual environment can attract students' attention, as they can go beyond time and space and unusually get information. It is the brightness, dynamics, and influence on different senses that can form a steady desire to learn more.

In this paper, it was proved that multimedia means of teaching English should not completely replace the conventional ones. Their combined use can improve the memorization of material and new vocabulary. The authors described the process of multimedia influence on the student's success and their motivation during teaching. It was found that students approve of such technologies and consider them the most effective means to learn English. The materials of this paper may be relevant for the scientific community, psychologists, sociologists, media specialists, educators, teachers, and professors at universities and educational organisations that can improve the process of using multimedia in teaching activities, which will help develop learning motivation not only in higher education students but in schoolchildren. In addition, the study results will be informative for linguists and translators, allowing them to improve their language skills more effectively and offering new methods for rapid learning. This study should be continued and expanded, and the study of the influence of multimedia on the motivational area of students should be continued as well. The conducted study does not exhaust all aspects of this pedagogical issue and requires further consideration of such issues as the influence of multimedia technologies on the speed of learning a foreign language; the process of distance learning based on such information means; the development of computer-based learning in schools and universities.

Expanding the study of multimedia in English education to include other countries can provide invaluable experience. Developed countries such as the US and UK, with their advanced infrastructure, can provide insights into best practices. Emerging countries such as Brazil and India, with their rich cultural environments and increasing digitalization, are keen to learn English, as are developing countries with particular potential for classroom technology, such as Kenya and Nepal. To validate, conduct a baseline assessment of English

language proficiency prior to exposure to multimedia. Use control groups that were taught using traditional methods for comparative analysis. To obtain qualitative information, collect feedback from participants after the intervention. Conduct long-term observation to assess learning and ensure that multimedia information remains culturally appropriate in a variety of contexts. A comprehensive understanding of the functions of multimedia in English language learning on a global scale can be gained through such a well-designed validation method and planned rollout to all countries.

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