

Development and Challenge of Digital Empowerment International Communication to International Education

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Abstract: Under the background of the deep integration of globalization and digitalization, this article focuses on the relationship between digital empowerment international communication and international education. Through in-depth analysis of the relevant theoretical basis, this article discusses the path, challenges and countermeasures of digital empowerment international communication to promote the development of international education. It is found that digital technology has played a positive role in expanding the scope of resource dissemination, innovating teaching models and promoting cultural exchanges for international education. But at the same time, it also leads to challenges such as unbalanced education, information overload and quality control, cultural conflict and value collision caused by the digital divide. Based on this, this article puts forward some countermeasures, such as strengthening international cooperation, perfecting digital infrastructure, establishing resource certification system and strengthening cross-cultural education. This article aims to provide theoretical reference and practical guidance for promoting the fair, efficient and diversified development of international education in the digital age, and to promote the better development of international education in the environment of digital empowerment and international communication.

1. Introduction

Under the background of the deep integration of globalization and digitalization, digital technology has reshaped the pattern of international communication at an unprecedented speed and breadth, which has had a far-reaching impact on various fields, and international education is no exception [1]. With the rapid development of digital technologies such as Internet, social media and big data, fundamental changes have taken place in the way, content and audience of international communication [2]. This change has brought new opportunities for the development of international education, but it also faces many challenges.

Digital empowerment of international communication, by expanding communication channels, enriching communication content and enhancing communication interaction, provides the possibility for the wide dissemination and sharing of international educational resources [3]. It breaks the time and space limitations of traditional international education, enables learners from different countries and regions to obtain diversified educational resources more conveniently and promotes the equalization of educational opportunities [4]. However, like the two sides of a coin, the international spread of digital empowerment has also brought a series of thorny problems to international education [5]. For example, the existence of digital divide leads some regions to be at a disadvantage in enjoying the educational dividend brought by digital technology, which further aggravates the imbalance of international education.

In view of this, it is of great theoretical and practical significance to discuss the international communication of digital empowerment for the development and challenges of international education. It is helpful to enrich the theoretical system of international education and deepen the understanding of the development law of international education in the digital age; It can provide reference for formulating scientific and reasonable international education policies and optimizing educational practice, and promote the sustainable development of international education in the digital age.

2. Digital empowerment, international communication and international education

Digital empowerment international communication relies on the new media communication theory, which emphasizes the interactivity, immediacy and decentralization of information communication. In the digital age, information dissemination is no longer limited to the traditional one-way mode. Social media and online platforms have become important channels for information circulation, and users are both information recipients and producers and disseminators [6]. Digital empowerment makes the main body of communication diversified. Not only official institutions and media organizations, but also ordinary individuals can participate in international communication, which greatly enriches the content and perspective of communication. The theory of viral diffusion effect of network communication shows that valuable information can spread rapidly in geometric series on the digital platform, which expands the influence of international communication and provides a theoretical basis for the dissemination of international educational resources.

International education aims at cultivating talents with global vision, cross-cultural communication ability and international awareness. Its theory covers the theory of international educational exchange, emphasizing the promotion of mutual understanding and knowledge sharing between different cultures through the transnational flow of educational resources and personnel [7]. On the other hand, the theory of educational internationalization pays attention to the integration of national education with international standards in terms of concepts, courses and teachers, so as to improve the quality of education and international competitiveness. The theory of multicultural education advocates respecting and integrating the uniqueness of students with different cultural backgrounds, cultivating inclusive and understanding cultural attitudes, and making students adapt to the global environment.

From the perspective of information dissemination, digital empowerment international communication provides an efficient information transmission channel for international education. According to the theory of educational communication, the effective dissemination of information is an important prerequisite for the realization of education. Digital technology optimizes the dissemination path of international educational information and improves the dissemination efficiency [8]. From the perspective of cultural exchange, international education is an important carrier of cross-cultural communication. Digital-empowered international communication strengthens the collision and integration of different cultures in the field of education, which accords with the demand of promoting cultural understanding and communication in cross-cultural communication theory.

3. Digital empowers international communication to promote the development of international education

3.1. Expand the scope of national educational resources

Table 1 Information on Course Coverage of Disciplines and Number of Registered Users for Some Online Education Platforms

Platform Name	Covered Discipline Fields	Number of Registered Users (Approximate Range)	Main Distribution Regions
Coursera	Over 10 discipline categories including computer science, engineering, humanities and social sciences, etc.	Tens of millions	Americas, Europe, Asia, etc.
edX	About 8 discipline categories including mathematics, physics, business management, etc.	Tens of millions	Multiple countries and regions worldwide
Khan Academy	Basic disciplines including mathematics, science, history, etc.	Hundreds of millions	Primarily in the United States, with widespread global distribution

Digital technology has broken the time and space constraints and greatly expanded the spread of international educational resources. Under the traditional education mode, high-quality international education resources are often concentrated in a few regions and colleges, and many learners are difficult to reach because of geographical and economic factors [9]. Nowadays, online course platforms, educational resource sharing websites, etc. widely spread all kinds of courses, academic lectures, learning materials, etc. with the help of digitally empowered international communication. According to incomplete statistics (see Table 1), the courses of these platforms cover many disciplines from natural sciences to humanities and social sciences, with registered users all over the world, providing rich and diverse learning choices for learners around the world.

3.2. Innovating the teaching mode of international education

Digital empowerment international communication has spawned a series of innovative international education and teaching models. Online live teaching enables teachers and students to interact with each other in real time across time and space. Teachers can explain knowledge and answer questions during live teaching, and students can give timely feedback on their learning. In addition, the virtual exchange project creates an immersive cross-cultural exchange scene for students with the help of virtual reality and augmented reality technology. This model breaks the physical boundary of traditional classroom, enhances the flexibility and interactivity of teaching, stimulates students' interest and participation in learning, and improves the learning effect.

3.3. Promote international educational and cultural exchanges

Digital platform has become an important carrier of cultural exchange in international education. Social media and online forums provide communication space for educational participants from different countries and regions. Students and teachers can share their own cultural customs, educational ideas, study and life experiences, and deepen mutual understanding. This kind of cultural exchange not only enriches students' cultural knowledge and cultivates their intercultural communication ability, but also promotes the integration of educational ideas under different cultural backgrounds and promotes the development of international education in a more diversified and inclusive direction. Through the international spread of digital empowerment, the cultural exchange of international education is no longer limited by the cost and frequency of field communication, and it has built an invisible but closely connected cultural bridge for educators and learners around the world.

4. Digital empowerment challenges faced by international education under international communication

4.1. Education imbalance caused by the digital divide

Table 2 Comparison of Digital Infrastructure and Digital Literacy in Countries with Different Development Levels

Category of National Development Level	Network Coverage Rate (%)	Average Network Bandwidth (Mbps)	Proportion of Students with Basic Digital Literacy (%)
Developed Countries	Above 95	50 and above	Above 80
Moderately Developed Countries	70 - 90	20 - 50	60 - 80
Developing Countries	30 - 70	5 - 20	30 - 60
Less Developed Countries	Below 30	Below 5	Below 30

Under the background of digital empowerment international communication, the digital divide has become a severe challenge for international education, which has aggravated the imbalance of education. There are significant differences in digital infrastructure and digital literacy in different countries and regions. Some developed countries have high network coverage and sufficient bandwidth, and students can smoothly access all kinds of online educational resources. However, in

many developing countries or remote areas, the construction of network infrastructure is backward, the network signal is unstable and the bandwidth is insufficient, which seriously affects the experience and effect of online learning.

Digital literacy covers the ability of information acquisition, evaluation, use and creation. Students in developed countries have received good digital technology education since childhood and can skillfully use various digital tools to study. However, in some underdeveloped areas, due to the lack of educational resources, students lack digital skills training, and in the face of massive online educational resources, they are often at a loss and cannot be effectively used. See Table 2 for specific data.

4.2. Information overload and quality control problem

In the digital environment, massive educational information is flooding in, which brings information overload and quality control problems to international education. With the international spread of digital empowerment, various educational resources are constantly emerging, and learners often fall into the dilemma of choice when faced with numerous online courses and learning materials. A large number of low-quality, repetitive and even erroneous information is mixed among them, which increases the difficulty of screening. In addition, the curriculum standards and evaluation systems of different platforms are not uniform, which makes it difficult for learners to judge the reliability and applicability of information.

4.3. Cultural conflict and values collision

In the process of digital empowerment international communication, conflicts in educational concepts and values under different cultural backgrounds have an impact on international education. Different countries have unique cultural traditions and educational systems, and their values are also quite different. When these cultures come into contact with each other through digital platforms, it is inevitable that they will collide. This difference may lead to students' confusion in the learning process, and even lead to cultural conflicts. Teachers also need to face the challenge of how to balance different cultural values and guide students to correctly understand and accept multiculturalism in the teaching process.

5. Coping strategies and prospects

In order to alleviate the educational imbalance caused by the digital divide, the international community should strengthen cooperation, and developed countries should provide technical assistance and financial support to developing countries and underdeveloped countries to help them improve their digital infrastructure construction. At the same time, countries need to attach importance to digital literacy education, bring it into the national education system, carry out targeted training, and improve the digital skills of the whole people. Facing the problems of information overload and quality control, we should establish an authoritative international educational resource certification system, formulate a unified curriculum standard and evaluation mechanism, and strictly examine and screen online educational resources. In addition, with the help of artificial intelligence technology, we can provide personalized recommendation services for learners and accurately push high-quality educational resources that meet their needs. In view of the conflict between culture and values, international education should strengthen the content of cross-cultural education and cultivate students' cross-cultural understanding and tolerance. Teachers should improve their intercultural teaching quality, guide students to treat different cultural values objectively and rationally, and promote intercultural communication and integration.

Although the international communication of digital empowerment brings many challenges to international education, in the long run, opportunities outweigh challenges. With the continuous innovation of technology, international education is expected to achieve wider resource sharing and deeper international cooperation. In the future, international education will pay more attention to cultivating students' comprehensive literacy to adapt to the digital age and promote the development of global education in a more fair, efficient and pluralistic direction.

6. Conclusions

The international communication of digital empowerment has brought unprecedented opportunities and challenges to the development of international education, and the integration of the two is the inevitable trend of the development of globalization and digitalization. From the perspective of opportunity, digital technology has broken the limitation of traditional education in time and space, greatly expanded the spread of international educational resources, and enabled high-quality educational resources to cross geographical boundaries and benefit more learners. It has also innovated the teaching mode of international education, and new modes such as online live teaching and virtual exchange projects have stimulated students' interest and participation in learning. In addition, various digital platforms have promoted cultural exchanges in international education and cultivated students' intercultural communication ability.

However, challenges cannot be ignored. The digital divide has caused imbalance in education among different countries and regions. Due to the lack of digital infrastructure and digital literacy, it is difficult for some regions to fully enjoy the educational dividend brought by digital empowerment. Information overload and quality control problems make it difficult for learners to choose between massive information, which affects the learning effect. Cultural conflict and value collision put forward higher requirements for both students and teachers. Faced with these challenges, the international community, governments, educational institutions and educators need to work together. By strengthening international cooperation, perfecting the certification system and strengthening cross-cultural education, we can effectively cope with difficulties.

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