Information Technology Assisting Ideological and Political Education for Exchange Students

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Abstract: In the context of globalization and informatization, how to enhance ideological and political education for exchange students abroad through modern information technology has become a significant issue. This study aims to explore effective informatization methods for the ideological and political education of exchange students. A questionnaire survey found that online learning platforms for ideological and political education are popular among exchange students. Using Chang'an University's Dublin College exchange students as a case study, an online platform for ideological and political education was designed and tested. The platform provides flexible and convenient learning methods, rich resources, personalized content, and strong interactivity, achieving efficient, extensive, and low-cost ideological and political education. The results show that informatization tools have great potential in ideological and political education for exchange students.

Keywords: Informatization; Exchange students; Ideological and political education

1. Background

With the rapid development of globalization, an increasing number of Chinese students are choosing to study abroad through exchange programs [1], broadening their horizons and gaining cross-cultural educational experiences. Every year, millions of students cross borders for academic exchanges, which not only provide them with opportunities to learn new knowledge but also immerse them in different political and cultural environments [1]. Ideological and political education holds a central position in China's educational system, laying a solid foundation for cultivating students' moral qualities, patriotism, and social responsibility [2]. However, when overseas, students leave their home environment and are exposed to different political ideologies and cultural values, which may affect their values and identity [3]. This experience poses new challenges for the ideological and political education of Chinese exchange students.

In the context of global informatization, leveraging information technology to support the ideological and political education of exchange students is particularly important. Information-based educational methods

can provide personalized learning resources and help students maintain their connection with their homeland in a globalized context, thereby enhancing their national identity and cultural confidence [4]. By using modern information technology, big data [5], social media platforms, and online educational tools, it is possible to transcend the limitations of time and space and effectively deliver ideological and political education to exchange students [6].

2. Significance of the study

The significance of this study lies in exploring how to use new tools and platforms to overcome geographical and temporal limitations to provide high-quality ideological and political education for exchange students in the context of globalization and informatization. The research emphasizes the importance of ideological and political education in enhancing exchange students' sense of national identity and cultural confidence. By utilizing modern information technologies such as new media and big data analysis [7], the study aims to improve educational effectiveness and personalization, creating effective tools to ensure the quality and accuracy of ideological and political education for exchange students [8]. This study serves as a necessary supplement to existing educational practices and a frontier exploration of educational technology applications [9]. By building a platform for ideological and political education and deeply analyzing the actual needs of exchange students and the application effects of informatics education, we propose practical suggestions to optimize the ideological and political education experience of exchange students and promote their comprehensive development in ideological and political literacy. This helps exchange students maintain their connection with their homeland, and understand, and disseminate China's values and culture in a globalized context.

3. Survey research

This study collected preliminary data and conducted problem-oriented analysis through a questionnaire survey. A total of 318 questionnaires were collected, mainly surveying and analyzing educational institutions, teachers, students, parents, and platforms. The survey found that educational institutions generally provide ideological and political education for students studying abroad but face the challenge of resource shortages [10]. Teachers believe that informatization is extremely important, frequently using electronic courseware and online courses as the main teaching methods, but they also encounter technical problems and lack of training [11]. Parents and students hold positive attitudes towards informatized methods of ideological and political education, especially recommending online courses or social media platforms.

Table 1. Does your institution provide ideological and political education for students who are going to study abroad?

Title	Options	Frequency	Percentage (%)	Cumulative Percentage (%)
Does your institution provide ideological and political education for students who are going to study abroad?	No	6	9.091	9.091
	Yes	60	90.909	100.000
Total		66	100.0	100.0

Table 2. What informational tools and platforms does your institution currently use for ideological and political education?

Title	Responses		Prevalence rate (n = 66)
	n	Response rate	
Online platforms	47	32.867%	71.212%
Educational software	47	32.867%	71.212%
Digital textbooks	45	31.469%	68.182%
Other	4	2.797%	6.061%
Summary	143	100%	216.667%

Table 3. What informational teaching tools or platforms do teachers usually use?

Title	Responses		Prevalence rate (n = 61)
	n	Response rate	
Electronic courseware	42	35.294%	68.852%
Online courses and videos	42	35.294%	68.852%
Educational software or apps	14	11.765%	22.951%
Social media	17	14.286%	27.869%
Other	4	3.361%	6.557%
Summary	119	100%	195.082%

Table 4. What types of informational education tools or platforms does your institution prefer to design?

Title	Responses		Prevalence rate (n = 64)
	n	Response rate	
Online learning platforms	21	22.826%	32.813%
Virtual classrooms	20	21.739%	31.250%
Educational games	25	27.174%	39.063%
Learning management systems	18	19.565%	28.125%
Other	8	8.696%	12.500%
Summary	92	100%	143.750%

Table 5. What informational methods do parents prefer for the ideological and political education of overseas students?

Title	Responses		Prevalence rate (n = 64)
	n	Response rate	
Online courses	32	23.881%	50.000%
Social media platforms	32	23.881%	50.000%
Interactive software	38	28.358%	59.375%

Table (Continued)

Title	Responses		Prevalence rate ($n = 64$)
	n	**Response rate**	
Webinars	32	23.881%	50.000%
Other	0	0.000%	0.000%
Summary	134	100%	209.375%

According to the survey results (**Table 1–5**), the majority of educational institutions (90.91%) provide ideological and political education for students going abroad (**Table 1**), with widespread use of online platforms (71.21%) and educational software (71.21%) as key informatization tools (**Table 2**). Teachers primarily use electronic courseware (68.85%) and online courses or videos (68.85%) for teaching, but face technical challenges and a lack of sufficient training (**Table 3**). Institutions prefer to design educational games (39.06%) and online learning platforms (32.81%) as their main tools (**Table 4**). Additionally, parents favor interactive software (59.38%) and online courses (50%) as preferred methods for supporting the ideological and political education of overseas students (**Table 5**). These data suggest that informatization tools play a crucial role in enhancing the convenience and effectiveness of ideological and political education.

A comprehensive analysis of the survey data reveals that online learning platforms are popular informatization learning tools. Applying various modules of online videos, images, articles, and discussion forums widely in ideological and political education platforms can significantly enhance the learning convenience for exchange students, stimulate their learning initiative, and improve the effectiveness of ideological and political education.

4. Platform development and application

The study aims to design an online platform for ideological and political education specifically for overseas exchange students of Chang'an Dublin International College of Transportation at Chang'an University. The platform's backend management application version is PbootCMS Development Edition PRO 3.3.7-A. The source code uses PHP 7.0.33, with the database driver being MySQLi. The web software used is Microsoft-IIS/10.0, and the platform is deployed on an Alibaba Cloud server and the appropriate computer will be purchased for the localized deployment of the platform in the future.

The platform's main modules currently include the Home Page, Platform Overview, Party and Mass Work, Special Features, and Ideological and Political Education. Additional modules can be added later based on actual usage needs. Here is the HTML template for the navigation bar. This code snippet is used to generate the website's navigation menu and supports the display of secondary navigation items. By using PbootCMS's {pboot} and {pboot:2nav} tags, you can dynamically generate the navigation menu and add appropriate styles based on the category code of the current page. This way, users can easily browse different modules and pages. Source code:

```
<!--pc导航-->
<div class="nav-box">
    <div class="w1420">
        <ul class="nav clearfix">

            <li>
                <a href="/">首页</a>
            </li>
            {pboot:nav}
            <li class="{pboot:if('[nav:scode]'=='{sort:tcode}')}on{/pboot:if}">
                <a href="[nav:link]">[nav:name]</a>
                <ul class="nav-2nd">
                    {pboot:2nav parent=[nav:scode]}
                    <li><a href="[2nav:link]">[2nav:name]</a></li>
                    {/pboot:2nav}
                </ul>
            </li>
            {/pboot:nav}

        </ul>

    </div>
</div>
```

Here is the source code example for the "Situation and Policy" section of the homepage. This code will display an article list and a carousel of images under the "Situation and Policy" category, where scode 10 corresponds to the category name "Situation and Policy" in the PbootCMS platform. Source code:

```
<div class="w1366">
    <!--part1-->
    <div class="part partOne clearfix">
        <div class="left fl">
            <div class="indexTitle">
                {pboot:sort scode=10}
                <span class="fl tit">[sort:name]</span>
                <a class="fr more tran400" href="[sort:link]">查看更多 &gt;</a>
                {/pboot:sort}
            </div>
            <div class="leftBox clearfix">
                <div class="picBox fl swiper-container-horizontal">
                    <script language="javascript" src="{pboot:sitetplpath}/js/centerCutImg.js"></script>
                    <script language="javascript" src="{pboot:sitetplpath}/js/ajax.js"></script>
                    <ul class="swiper-wrapper">
                        {pboot:list page=0 scode=10 num=4 isico=1}
                        <li class="swiper-slide">
                            <a href="[list:link]">
                                <div class="pic"> <em style="background-image: url([list:ico]);"></em> </div>
                                <div class="text">
                                    <p class="TXTovehid">[list:title]</p>
                                </div>
                            </a>
                        </li>
                        {/pboot:list}
                    </ul>

                    <div class="swiper-button-next picBoxNext"></div>
                    <div class="swiper-button-prev picBoxPrev"></div>
                    <div class="swiper-pagination btn swiper-pagination-clickable swiper-pagination-bullets"></div>
                    <span class="swiper-notification" aria-live="assertive" aria-atomic="true"></span>
                </div>
                <div class="partList fr">
                    <ul>
                        {pboot:list page=0 scode=10 num=7}
                        <li>
                            <a href="[list:link]">
                                <p class="TXTovehid tran400"><b></b>[list:title]</p>
                                <i class="top50">[list:date  style='Y-m-d']</i>
                            </a>
                        </li>
                        {/pboot:list}
                    </ul>
                </div>
```

5. Innovations and advantages of the platform

5.1. Innovations

(1) Intelligent recommendation system: Utilizes artificial intelligence algorithms to recommend relevant courses and content based on learners' interests and needs.

(2) Big data analysis: Analyzes learners' data to provide precise learning feedback and improvement suggestions, enhancing learning effectiveness and course quality.

(3) Micro-courses and short videos: Uses short videos and micro-courses to provide concise explanations on specific topics or issues, catering to the fragmented learning needs of modern learners.

(4) Case teaching: Employs real case studies for teaching to help learners understand the connection between theory and practice, enhancing problem-solving skills and practical application abilities.

(5) Social hotspot topics: Regularly launches courses on social hotspots and current political issues, providing timely interpretation and analysis of major current events to help learners stay updated with the times.

5.2. Advantages

(1) Convenience and flexibility: Exchange students can access the online ideological and political education platform anytime and anywhere via the Internet, allowing them to arrange their study time flexibly.

(2) Rich resources: The platform can integrate a vast array of educational resources, including videos, articles, audio, and interactive courses, providing diverse learning materials to meet different learners' needs.

(3) Continuous updates: The online platform can quickly update course content to reflect the latest ideological and political trends and policy changes, ensuring the timeliness of educational content.

(4) Cost-effectiveness: The online platform reduces traditional education costs related to venues and personnel, significantly lowering learning expenses and increasing the accessibility and reach of education.

(5) Wide coverage: The online platform can cover a broad geographical area, breaking regional limitations and allowing more exchange students to receive high-quality ideological and political education.

6. Future Reform Directions

(1) Virtual Reality (VR) and Augmented Reality (AR) technologies: Utilize immersive learning experiences to make ideological and political education more vivid and engaging, thereby enhancing learning outcomes.

(2) Interactive live classrooms: Integrate live streaming technology to enable real-time interactive teaching, increasing teacher-student interaction and enhancing classroom engagement [12].

(3) Gamified learning: Introduce game elements such as points, badges, and leaderboards to make learning more fun and challenging, stimulating learners' motivation.

(4) Mobile learning applications: Develop specialized mobile applications that allow exchange students to learn anytime and anywhere via their phones or tablets, further improving convenience.

7. Conclusion

This study explores the enhancement of ideological and political education for exchange students through modern information technology means such as big data analysis, social media platforms, and online educational tools in the context of globalization and informatization. The questionnaire survey revealed that educational institutions generally provide ideological and political education but face challenges of insufficient resources and lack of technical training [13]. To address these issues, the research team designed and tested an online platform specifically for the ideological and political education of exchange students from Chang'an University's Dublin College. The platform includes multiple modules and video learning materials, achieving efficient, extensive, and low-cost ideological and political education through flexible and convenient learning methods, rich resources, and personalized content.

After the trial run, feedback from users identified future improvement directions, including achieving immersive learning through VR and AR technologies, enhancing teacher-student interaction through interactive live classrooms, introducing gamified elements to increase learning fun and motivation [14] and developing mobile learning applications to facilitate anytime, anywhere learning for exchange students [15].

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Disclosure statement

The authors declare no conflict of interest.

References

[1] Liu P, 2018, Research on the Ideological and Political Situation of Chinese Overseas Students Since the Reform and Opening Up, thesis, Shaanxi University of Science and Technology.

[2] Wang Y, 2021, A Study on the Ideological and Political Education of Chinese Overseas Students, thesis, Jilin University.

[3] Zhao Q, 2018, The Alienation and Transcendence of Deep Integration of Modern Information Technology and Ideological and Political Courses in Colleges and Universities. Academic Forum, 41(5): 162–167.

[4] Liu T, 2017, Research on Personalized Services of Ideological and Political Education in Colleges and Universities Under the Background of Big Data, thesis, Kashgar University.

[5] Zheng P, Cao X, 2015, Exploring Strategies for Innovating Ideological and Political Education in Universities Through WeChat Platform. Journal of Chongqing University of Posts and Telecommunications (Social Science Edition), 27(4): 81–84.

[6] Ji H, 2015, The New Mission of Ideological and Political Education in Schools in the Era of New Media. Xuehai, 2015(6): 152–156.

[7] Zhang R, 2020, Research on Innovation in Ideological and Political Education in Universities Under the Background of Big Data, thesis, East China Normal University.

[8] Dong H, 2015, Ecological Integration: A New Realm of Ideological and Political Education in Universities in the

Internet Era. Journal of South China Normal University (Social Science Edition), 2015(5): 139–144 + 192.

[9] Huang W, Wei H, Lin J, 2022, Research on the Deep Integration of Big Data Information Technology and Ideological and Political Education in Universities. Journal of Shandong Agricultural Engineering College, 39(12): 121–128.

[10] Xie J, 2018, Research on Innovation of Online Ideological and Political Education in Universities from the Perspective of Big Data, thesis, University of Electronic Science and Technology of China.

[11] Huang A, 2014, The Reform of the Teaching Model of Ideological and Political Courses in Universities in the Information Age. Chinese University Teaching, 2014(9): 45–49.

[12] Zhang J, 2022, Research on the New Mode of College Students' Ideological and Political Education Based on Informatization. China Science and Technology Journal Database Research, 2022(11): 3.

[13] Liu H, 2015, The Practical Dilemma and Demands of the Application of Big Data in Ideological and Political Education in Colleges and Universities. Ideological and Theoretical Education, 2015(9): 60–65.

[14] Wu S, 2024, Research on Informatization of Ideological and Political Education for College Students, thesis, Nanjing Normal University.

[15] Li M, 2019, New Opportunities for Ideological and Political Education Research in the Era of Big Data. Modernization of Education, 2019(38): 174–175.