

Education

School Environment and Character Building of Ethnic Minority Students Powered by Digital Education

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The principal objective of education is to cultivate essential skills and sound moral values in students. Students belonging to ethnic minority groups in basic education levels are in a crucial phase of developing their character. The incorporation of educational technology within ethnic minority education has the capacity to enhance the academic proficiency of these students, elevate their self-esteem, and foster a constructive, optimistic, and inclusive perspective. The aim of this article is to shed light on the impact of digital education on the school environment of ethnic minority students and its influence on their character development. The article draws on examples of online distance education practices in China to illustrate this difference.

Keywords: Digital Education; Ethnic Minority Education; Digital Distance Education; Character Building

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THE term “character” pertains to an individual’s cognitive, affective, and behavioral patterns. It encompasses the entirety of their unique attributes that differentiate them from their peers. A person who has achieved a high level of development is expected to possess a stable and positive character (1). According to the study, individuals who exhibit positive character traits are better equipped to handle the various challenges and complexities that arise in both their personal and academic lives. They tend to approach these situations with a sense of assurance and determination and are capable of devising effective and proactive methods for managing stress and adversity (2). Simultaneously, an individual’s character is not inherently present but rather is shaped by prolonged academic

and societal upbringing. The development of students’ character can be influenced by their personal traits as well as their home, school, and social environments and the interplay between these factors (3). The school environment is a crucial factor in fostering the development of students’ positive character traits.

The inclusion of ethnic minority education within the framework of Chinese national education has played a pivotal role in enhancing the quality of life for minority populations, fostering social and economic development within minority regions, and strengthening national unity. According to available data, in 2022, the enrollment of ethnic minority students in schools of diverse types and levels across China amounted to 33.2797 million, representing 11.26% of the overall student

population (4). Education in minority areas continues to encounter numerous challenges, including inadequate teaching quality, incomplete curriculum structures, and unreasonable school deployment, primarily due to historical factors and geographical limitations. One of the most notable concerns pertains to the uneven distribution of educational resources between minority schools located in urban and rural areas, as well as the inadequate provision of educational facilities in impoverished and border minority regions (5). The hindrance of minority students' learning capacity, efficacy, and performance has been a significant outcome.

In the given context, ethnic minority students may experience a decline in self-assurance towards themselves, the schools they attend, and the communities they belong to. The individuals in question develop a sense of skepticism regarding the potential of education to provide them with improved prospects for the future, and consequently, they exhibit a dearth of ambition towards pursuing advanced levels of academic instruction (6). The negative impact of diminished self-assurance can result in decreased levels of academic engagement and drive, as well as a decline in academic proficiency. This, in turn, can have a detrimental effect on an individual's self-worth and impede the development of a strong character. The educational system for Chinese ethnic minorities has been faced with more demanding and specific requirements in terms of character development for minority students. In response, efforts have been made to enhance the curriculum program, enrich course contents, and modernize teaching methods in order to comprehensively improve the quality of learning for minority students, boost their self-esteem, and enhance their character (7).

The emergence of the internet and information and communication technology (ICT)-enabled digital education has presented a powerful opportunity for the advancement of minority education. This is achieved through the establishment of a robust cyber learning environment that caters to the needs of minority students. The present study centers on elucidating the impact of digital education on the school milieu of ethnic minorities and its influence on the development of students' character. The study employs China's digital distance education experiments as a case in point.

The improved digital facilities of minority schools have significantly expanded minority students' learning spaces and contents, broadened their knowledge horizons, and heightened their self-efficacy.

In the past two decades, China's digital education has undergone tremendous expansion. Internet and IT infrastructure investments in schools have increased exponentially. Educational communities of ethnic minorities have committed to constructing the "Three Links and Two Platforms" project in accordance with the state's digital strategy. The "Three Links" refer to the school's connection to a broadband network, the class's connection to outstanding teaching resources, and the individual's connection to an online learning space. "The Two Platforms" refers to the nation's administration and public educational resource platforms. Every student has access to high-quality digital resources for fundamental education through the nation's public

educational resource platform. Children who reside in remote boundary and rural areas can "share the same class" (8) with those who reside in major metropolitan areas. According to the project, internet connectivity and internet-based learning environments are mandatory for all types of schools at all levels; high-quality teaching materials are collected via smart education platforms and pushed to all classrooms of primary and secondary minority schools; and minority students can create their own online learning space on the public educational resource platform (9). As a result of the rapid advancement of educational technology, mobile teaching, live streaming classrooms, individualized instruction, and instructional evaluation based on big data have become standard education paradigms. Improved digital facilities and new technologies have eliminated spatial and temporal restrictions in education, granting minority students access to vast quantities of high-quality learning resources and greater learning freedom, which can significantly boost their self-concept and self-esteem.

Digitally enabled distance education Access to high-quality teaching helps enhance minority students' self-confidence.

The majority of ethnic minorities reside in the impoverished regions of the west and southwest. Due to poor environmental conditions, an underdeveloped economy, and a lack of high-quality human resources, minority communities have typically experienced a teacher shortage. There is difficulty retaining competent teachers in these schools. Low teaching quality and high teacher turnover rates result in negative affective experiences and a sense of inferiority among minority students. Moreover, the unique cultural and environmental contexts of ethnic groups have a strong influence on the character traits of minority students, making them a unique group of students who require educators with a higher level of professional competence and exceptional teaching techniques (5).

Against this background, digital distance education provides benefits in addressing the lack of qualified minority teachers. The "Digital Education-Powered Ethnic Minority Education Development Program" has been implemented through collaboration among several prestigious national-level schools and minority schools, under the leadership of the Ethnic Education Development Center of the Ministry of Education. The program's objective is to establish a digital education community for minority regions. Renowned educational institutions, including the High School Affiliated to Renmin University of China (10), Beijing No. 4 High School (11), and Chengdu No. 7 High School (12), employ educational technology to incorporate diverse resources and take the lead in creating inter-regional teaching communities for students residing in ethnic minority regions. This is especially beneficial for those who attend schools with limited teaching quality and inadequate educational resources.

To implement Sichuan Province's Ten-year Action Plan for Minority Education Development, Chengdu No. 7 High School, in collaboration with 310 minority schools from 11 provinces and one city, launched a distance education initiative called "Shared Classrooms." In this endeavor, the online-offline blended distance-synchronous teaching strategy, also known as

the “Double Teachers Classroom” model (a class taught by an online anchor teacher and an on-site tutor), is utilized (13). Chengdu No. 7 High School utilizes regular courses for live streaming. According to the school’s curriculum schedule, each live streaming class is assigned a subject-specific anchor teacher. The instruction process of the selected classes is live streamed and viewed synchronously by the 310 minority schools’ remote terminal classes. As is customary, each terminal class is staffed with teachers of pertinent subjects. Through this instructional model, Chengdu No. 7 High School effectively shares the instruction of its anchor teachers with minority schools that lack teachers with high levels of expertise. The “shared classrooms” make it easy for minority students from failing institutions to receive high-quality instruction.

Furthermore, there exists a significant scarcity of teachers specializing in subjects such as English, music, the arts, and information technology within minority regions. The utilization of live streaming as a means of instruction provides assurance that the delivery of high-quality education in these subject areas can persist in schools with limited representation (14).

Currently, more than 800 schools in areas with a Chinese minority are using the distance-synchronous live streaming education paradigm, which benefits more than a million students and 100,000 teachers. Minority students who are enrolled in the remote learning program report significantly higher levels of learning pleasure, as well as increased feelings of accomplishment and self-worth. The “screen” in the classroom has a considerable positive impact on remote minority students’ academic prospects and fosters educational equity (15).

The contact with online fellow-students from the “shared classrooms” encourages the development of positive mindsets in minority students.

A child’s school environment is made up of a variety of components, from the desk at which he or she sits to the child seated next to them. The makeup of the student body has a big impact on how students develop. Coleman et al. discovered that there is a significant correlation between minority students’ academic achievement and the makeup of the student body in their extensive study of 640,000 students from over 4,000 institutions. A minority student’s performance is likely to improve if he or she is paired with classmates from homes with excellent educational backgrounds. Black kids who attend schools with a higher percentage of white students feel more in charge (16).

Minority populations tend to reside in concentrated communities that are distinct from other ethnic groups, despite being dispersed over a wide geographical region. During the pre-school years, children from minority backgrounds are provided with ethnic cultural education by their parents. Upon reaching school age, the educational experience provided by schools regarding ethnic culture and the behavior of peers from the same or other local minorities is the primary influence on the development of an individual’s character (17). Cross-regional digital distance education programs such as “Shared Classrooms” have been found to significantly expand the social environment of minority children. It is now possible for individuals to have academically proficient peers from renowned institutions such

as Chengdu No. 7 High School as their “classmates.” The learning habits, methods, outlook, and values of the minority students’ peers have a gradual and inevitable positive impact on their mental development and character formation.

“Classmates” from prestigious schools act as role models for ethnic minority students.

According to child developmental psychology, the impact of peers on a child’s behavior and development can be significant, potentially surpassing that of parental and pedagogical influences. Albert Bandura’s social learning theory posits that observation and modeling are fundamental factors in the process and motivation of human learning. The theory posited by the author extends beyond the notion that learning solely arises from direct interaction with the environment (18).

These accomplished and engaged online “classmates” have emerged as role models for minority students in terminal classes in the “Shared Classrooms” program run by Chengdu No. 7 High School. According to survey findings, the majority of minority students look up to these outstanding classmates as role models. Approximately 57.6% of them think they gain a lot of new ideas and knowledge from the students they look up to, and 54.5% claim that having good “classmates” has successfully stimulated their desire to learn. About 63.2% of them use these examples as a yardstick to assess their own weaknesses. Minority students better understand the educational tenets and instructional strategies of the renowned institution by seeing and imitating role models’ behavior (19).

Sharing “classrooms” with top-notch school students enhances ethnic minority students’ self-esteem.

Minority students from border and rural areas and their urban counterparts from prominent schools can share a high-quality education thanks to digital education. For ethnic minority students, this serves as a powerful motivator and boost to their self-esteem. One former student who eventually received admission to Beijing University once commented, “Digital distance education inspired our dreams and confidence.” In the 2012 Distance Education Essay Competition, Yu Kang, a student at Banshanmen Middle School in Danba County, Ganzi Prefecture, Sichuan Province, took home the top honor. “In the new semester, my brand-new school uniform with the words “Chengdu No. 7 High School Distance Education” printed on it seems to be generating magical power in me,” she said in her essay. “Before that, the idea of having urban students in my classroom seemed like an unattainable ideal. Now that I’m wearing the unique school uniform, I feel quite proud of myself and am incredibly inspired to perform well.” According to a study by the Ethnic Education Development Center of China titled *The Promotive Effect of Distance Live Streaming Instruction on Educational Development in Minority Areas*, 52.3% of students in these areas believe that distance live streaming instruction has significantly increased their self-confidence (19).

Contact with fellow students from “shared classrooms” allows minority students to better understand themselves.

Minority students from culturally disadvantaged backgrounds face restricted opportunities for expanding their knowledge and broadening their perspectives. Digital education platforms enable minority students to not only attend high-quality school classrooms but also engage in collaborative extracurricular activities, including science and technology festivals, art festivals, and theme-based debates. Every academic year, high-achieving students from minority schools are extended an invitation to reside and study at Chengdu No. 7 High School alongside their host counterparts for duration of one week. The augmented engagement of minority students with their virtual peers substantially enhances their social encounters.

In the past, ethnic minority students tended to view students from prestigious institutions as gifted, predestined talents whose excellence was unattainable by themselves. However, through online and offline contact with the latter, they have realized that its excellence is due to its hard work and scientific learning techniques. “There are no supermen at Chengdu No. 7 High School, only learners with the tenacity of supermen,” a minority student wrote in his diary. “Now I realize that they are not born to be more intelligent. They are simply more diligent and driven than we are” (19). More information about their online classmates leads to a better understanding of themselves and the realization that individual progress is the result of consistent effort.

Sharing “classrooms” with key school students assists in upgrading the comprehensive competence of ethnic minority students.

After years of educational experiences, principals and teachers in schools located in minority areas have determined that a significant proportion of minority students exhibit low levels of self-confidence and willpower. This is considered to be the pri-

mary reason for their low learning efficacy and negative attitudes towards learning. By participating in a superior academic program alongside exceptional peers, minority students are afforded the chance to adopt a new identity as a student from a distinguished institution and to benefit from the same exceptional educational resources as their proficient classmates. With the passage of time, individuals will acquire an awareness of the importance of adhering to the elevated benchmarks set by prestigious educational institutions, leading to the attainment of comprehensive proficiency development. According to a pertinent inquiry, 66.7% of the surveyed educators asserted that students have exhibited a noteworthy enhancement in their overall competencies, such as self-confidence, positive learning attitudes, and autonomous learning ability, subsequent to more than two years of digital distance education experience (19).

Conclusion

The cultivation of solid moral character among minority students is imperative not only for their individual growth but also as a necessary condition for the advancement of minority regions within society. The advent of the internet and information technologies has created a novel ecology and opportunity that has effectively dismantled the isolated learning environment in ethnic minority regions. As a result, minority students can now access high-quality educational resources, similar to those of their peers in developed areas, without any temporal or spatial constraints. The implementation of digital transformation in minority education has the potential to enhance the school environment for students by providing access to a wider range of learning resources, experienced educators, and positive peer influences. This, in turn, may broaden their knowledge base, enhance their self-concept, and facilitate their character development to meet the demands of social progress. ■

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