

Current influencing factors of excellent students in senior high schools: A case study of Yongjia County, Zhejiang Province, China

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Abstract: The topic of excellent students offers valuable insights into effective strategies for cultivating academic success students. The factors influencing their achievement are teachers, educational policy, teaching methods and the management methods, etc. This study employs qualitative research methods, particularly case studies, to analyze these elements. By highlighting critical success factors, the article aims to provide some enlightenment for the quality of education.

Keywords: excellent students; critical success factors; high schools

1 Introduction

In recent years, educational research in China has predominantly focused on struggling students, aiming to reduce academic failure rates in large-class teaching environments. However, the cultivation of excellent students—those who demonstrate exceptional academic performance, intellectual capacity, and personal qualities—remains underexplored despite its potential to elevate overall educational quality.

The large-class teaching model is prevalent in China due to its vast population, yet this system faces challenges in catering to diverse student abilities. Increasing the proportion of excellent students could significantly enhance overall educational quality. Therefore, researching the factors contributing to their success is not only necessary but also holds substantial practical significance. This study aims to identify actionable strategies for improving education outcomes, and with rigorous research design, its objectives are expected to be achieved.

Excellent students are high-achievers who demonstrate exceptional academic performance, intellectual capacity, and well-rounded personal qualities, enabling them to excel in high school studies. In contrast, struggling students—those who face academic difficulties—often fall behind may due to China's large-class teaching model. Historically, the emphasis on elite higher education access created a selective system where only a subset of students could pursue university studies, leaving many to struggle with subjects they find uninteresting or challenging. This situation stems partly from educational policies and inadequate teaching methods, which can be perceived as inhumane when forcing students to study unsuitable disciplines. Meanwhile, excellent students typically perform well across all subjects, as they are selected through competitive senior high school entrance examinations.

Currently, China employs stratified teaching as a solution to address educational disparities. This method categorizes

students by ability level, allowing excellent students to be grouped in advanced classes. This approach is particularly effective in Yongjia County, where academically strong students are predominantly enrolled in Yongjia High School, with some attending Shangtang High School and other institutions. The core mechanism of this model lies in grouping high-achievers together, enabling them to learn at a consistent pace and reducing disruptions from ability gaps. By concentrating advanced learners in dedicated classes, teachers can deliver targeted instruction more efficiently, ensuring both educational quality and teaching effectiveness.

As science and technology advance, China faces dual challenges: increased leisure time for many citizens and rising unemployment. Schools have emerged as a critical solution by equipping students with knowledge to adapt to technological progress. Among these learners, high school students—being cognitively mature—are particularly responsive to structured education. In this county, high schools demonstrate effective progress tracking, with student development aligning well with curricular expectations.

Multiple factors influence the academic progress of high-achieving students, including social environment, societal values, students' potential abilities, teachers' expertise, teaching methodologies, and curricular objectives. These elements collectively contribute to their outstanding performance.

Yongjia County, a rural area with a long-standing academic tradition, exemplifies this phenomenon. Rooted in China's imperial civil examination history, the region has fostered a culture of intellectual pursuit, with a legacy of scholars and a pervasive study-oriented atmosphere.

In recent years, the focus on cultivating excellence has intensified in Yongjia, driven by heightened parental and societal expectations for educational quality. This trend has made the topic of high-achiever development a priority in local education discussions. The research findings will provide actionable insights for enhancing student development countywide, offering practical recommendations with broader educational implications.

2 Literature review

2.1 Excellent students

Li and Zhang (2021)[1] defined excellent students as high-achieving individuals characterized by superior intelligence, outstanding examination performance, active cognitive engagement, and exceptional thinking abilities that surpass their peers. They further emphasized that these students typically possess disciplined learning habits and well-rounded personal qualities.

In the Chinese context, special attentions are paid to the excellent students, for example, the youngster classes in elite universities. Yang Yuxin, Xu Jinjie (2022)[2] emphasized the powerful foundation plan of China, that is OECD plan, which plans to train some determined, interested and gifted students to become future excellence.

In China, "excellent students" often refer to smart students with good achievements in study, while the term of "excellent students" serves as a progressive evaluative label for those exhibiting the potential for excellence. It can also extend to include students with distinctive aptitudes or specialized skills [3].

2.2 Special efforts and methods of teaching in China

High schools in China focus on developing the students' reflective and critical thinking, along with implementing hands-on, inquiry-based and problem-based learning approaches. These efforts are to facilitate knowledge transfer and application, thereby enhancing students' creative and innovative capacities [1]. To achieve this, teachers are encouraged to create diverse opportunities for students to demonstrate and further develop their individual interests and abilities.

2.3 Factors influencing excellent students' development

The factors influencing excellent students are the social environment, cultural context, the educational theories, the

political ideas and value orientation(Fu Yangping,2016). At the institutional level, key factors encompass educational objectives, pedagogical methods as well as the roles of teachers, schools, and family support systems. At the individual level, these students are typically characterized by a strong intrinsic interest and motivation for learning, high cognitive ability, and a well-developed set of non-cognitive factors. Their distinctive profile often arises from an interaction between innate potential and acquired competencies. All of these factors contribute to making them special.

2.4 The principle of teaching according to one's special abilities

The excellent students education is also the embodiment of Confucius' pedagogical principle of teaching according to one's special abilities. This method is a scientific and humane way since the students' potential abilities and learning desires are the theme of education.

2.5 Differentiated instruction

Carol Ann Tomlinson (1999)[5] emphasized the critical role of considering students' individual learning styles and readiness levels when designing lesson plans. Addressing these differences is essential, as every student requires personalized progress and development. Consequently, teachers should prioritize individual needs. Despite varying abilities and talents, students can mutually support and learn from one another through collaborative activities. This peer-driven approach not only fosters mutual encouragement but also proves highly effective, particularly in large classrooms prevalent in China today.

3 Methodology

3.1 Research objective

This research aims to identify and analyze the key factors influencing the academic excellence of high school students in Yongjia County, Zhejiang Province, China. It will focus on multiple dimensions, including social environment, educational policies, institutional objectives, teaching methodologies, teacher quality, family support, and peer interactions, to comprehensively explain the phenomenon. Ultimately, the research seeks to enhance educational quality in the region, thereby aligning with societal developmental needs. Additionally, by cultivating well-rounded and outstanding students, the study intends to empower them to achieve their personal aspirations. Furthermore, the insights gained from successful high-achievers may serve as valuable references for students facing academic challenges.

3.2 Research questions

- (1)Who are excellent students?
- (2)What are the characteristics of excellent students?
- (3)What are the policies towards the excellent students?
- (4)What are the factors influencing the excellent students of high schools in this area nowadays?
- (5)What should be done to make the excellent student a better future or result?
- (6)What conclusions can be got from the research?
- (7)What can be the achievements from this research?

3.3 Research hypothesis

- 1) The academic excellence of high-achieving students is influenced by a multifaceted interplay of factors, including social environment, cultural context, the institutional-level and individual-level factors such as those mentioned above.
- 2) The progress and development of high-achieving students result from a dynamic interplay between social environmental factors and their inherent attributes, including inherited abilities, personality traits, and personal qualities.
- 3) The excellent students can be more excellent with the help of good educational methodology and good policies.
- 4) Studying high-achieving students can facilitate the progress and development of academically disadvantaged

students in this region, as the strategies and experiences of top performers may serve as valuable references for improving learning outcomes among struggling learners.

3.4 Research methods

The primary research method employed is literature review, involving extensive reading of educational books and academic articles, with detailed notes taken on relevant materials. Additionally, qualitative methods such as case studies, investigations, observations, interviews, and narrative inquiries are utilized to fulfill the research objectives.

Questionnaires are designed to collect data, with sample selection tailored to reflect the unique characteristics of the research focus on high-achieving students. The chosen methods—including narrative inquiries with teachers and students—will capture their experiences and perspectives on teaching and learning in high schools, thereby manifesting the distinctive nature of this study.

Case study serves as the primary methodology, with 20 high-achieving students selected as samples to document their personal development and success experiences. The recorded data undergoes thematic analysis, including classification, synthesis and conclusion. Subsequent analysis of these themes forms on the basis of discussion and conclusions, ultimately generating recommendations to enhance educational quality and promote equity.

4 Discussion

Fu Yangping (2016)[6] argued that Chinese teachers predominantly focus on the majority of students, neglecting those who struggle academically. This approach often leads to a loss of interest and engagement among weaker students, resulting in boredom and disengagement from learning. Additionally, the large-class system prevalent in China tends to suppress individualism among students, and in some cases, this teaching method may contribute to academic failure. Meanwhile, some education specialists emphasize the importance of catering to excellent students, as this targeted approach has proven effective and successful. Many high-achieving students indeed thrive under such a method.

In contemporary China, both the challenges faced by the poor and struggling students and the educational needs of high-achieving students deserve significant attention. It is noteworthy that academic elite students from prestigious high schools often exhibit superior future development trajectories compared to their peers from schools with less academic atmosphere. These top-performing students are expected to become scientists, scholars, specialists, and leaders across diverse fields of Chinese society. For instance, graduates of Yongjia High School are predominantly destined for scholarly careers with high academic potential, whereas students from less academically competitive schools typically face more limited opportunities. Consequently, research on excellence-oriented education for high-achieving students emerges as a critical priority deserving comprehensive focus.

What are the factors which influence the excellent students of high schools in Yongjia, Zhejiang Province in China nowadays? We think the complex interplay of factors include the social environment at both national and global levels, domestic and international policies, educational theories, objectives, and aims, teaching methodologies, teacher quality, and students' existing abilities alongside their untapped potential. These elements collectively influence the academic trajectory and holistic growth of these students. The synergy between these factors underscores their fundamental role in shaping the future success of the high school students in Yongjia, Zhejiang Province of China nowadays.

The county is located in a rural area, the future prospects and career pathways for children from peasant families warrant careful examination. High school education plays a pivotal role in equipping students with essential knowledge and employability skills for their future careers. Given the youthful energy and aspirations of high school students, failure to provide them with adequate educational support may lead to frustration and disillusionment. This potential outcome underscores the urgency for education specialists to prioritize individualized development and progress for every student.

In alignment with China's national education policy, which emphasizes comprehensive inclusivity and guarantees that no student is left behind, these efforts hold profound significance for both the advancement of China's educational system and the broader development of human capital in society.

Facing all students in China occasionally leads to situations where high-achieving students experience delayed progress due to the need to accommodate slower learners, while underperforming students gain a sense of accomplishment through tailored support. The researchers argue that this approach ultimately benefits society by promoting equal educational opportunities, which is essential for China to achieve comprehensive development for all individuals. True educational equality demands three core principles: equal access to learning opportunities, equal procedure for every person, and equitable outcomes in academic achievement. As a fundamental national policy, China's comprehensive education system emphasizes general knowledge acquisition, requiring every student to study all subjects and strive for proficiency. In contemporary Chinese high schools, particularly in key institutions across regions, many academically successful students demonstrate exceptional subject mastery. These high achievers typically excel in standardized examinations, reflecting the effectiveness of the education system.

A notable example is the education system in Yongjia County, Zhejiang Province, which has shown consistent improvement in enrollment rates and national college entrance examination scores year by year. This progress highlights the successful implementation of quality education for high-achieving students in the region.

The method of "teaching according to one's abilities" has been a fundamental and enduring approach in China's educational history and practice. This methodology prioritizes the cultivation of each student's unique potential, which is humane and successful. By focusing on the inherent abilities of learners, this approach not only embodies humanistic educational principles but also demonstrates remarkable effectiveness in fostering academic success. It also enhances the quality of education for high-achieving students. Undoubtedly, this methodology possesses distinct Chinese characteristics and offers unique advantages. It is hoped that education for excellent students will continue to improve, fostering smarter and more well-rounded learners.

The policy and educational aims highlight the success of excellent students. Further research in this area can enhance educational outcomes. It is hoped that teachers and education specialists will engage in this field to drive more research and achievements.

5 Conclusion

China's educational focus differs from other countries. While extensive research is conducted on struggling students in China, studies on high achievers are comparatively fewer. This reflects China's emphasis on democracy and equality, contrasting with the U.S.'s focus on individual and elite development. These differences shape distinct national policies, yet mutual learning between countries can be beneficial.

Excellent students are fortunate to possess superior abilities in certain areas. The research aims to enhance educational quality and success. Though methodologies vary and results may differ, such studies are always valuable. Addressing challenges faced by high-achieving students in this region can improve local education quality, making the research meaningful and impactful.

This study holds fundamental importance for China's education. Its findings will inform better policy-making and elevate nationwide educational standards. Attention to excellent students is crucial, as they may become future scientists, scholars, leaders, and elite professionals across fields.

While Chinese education prioritizes inclusivity for all students, including those struggling, this research focuses on high achievers. It highlights education's positive aspects and identifies successful methods, making the study unique and

special.

General subjects education is a key method in China's educational field, promoting progress and development for all students. It emphasizes moral education alongside intellectual, physical, artistic, and labor education, recognizing that intellectual achievements alone do not define success. The broader educational goals include fostering lifelong learning, which benefits everyone.

UNESCO (2003) proposed that everyone should learn to study, learn to do, learn to live together, learn to be and learn to change. Modern educational theory suggests all individuals can succeed, with excellent students serving as models for others.

Human sustainable development is also prioritized. Research on factors influencing high-achieving students aims to improve educational methods and practices, offering both theoretical and practical insights. Such research can also support the development of struggling students, benefiting disadvantaged groups in China and globally.

Lin Chongde (2021)[7] highlights that high-tech industry and social changes demand laborers with diverse knowledge, key competencies, and positive attitudes. In today's competitive society, students' talents and abilities drive their success. Research on excellent students can further progress for struggling learners, though environmental influences remain critical alongside inherited abilities.

High-achieving students exhibit smartness, strong learning abilities, effective habits, and innovative thinking styles, contributing to their academic success. This research can also serve as a model for primary, secondary, kindergarten, and higher education students. Thus, research on excellence in Yongjia's high schools represents a valuable endeavor in education, poised for success.

The results will be insightful and useful, helping teachers and specialists understand factors shaping student development. The research is underway and will undoubtedly yield meaningful findings.

Conflicts of interest

The author declares no conflicts of interest regarding the publication of this paper.

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