A Comparative Study of Academic Assessments between Local High School Education and the International Baccalaureate Diploma Program in China

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Abstract. Since the 1980s, Chinese education has placed a greater emphasis on internationalization and the personal development of students. While international schools, such as International Baccalaureate Diploma Programme (IBDP) schools, are on the rise, China is continuously changing its assessment methods, including the Gaokao and comprehensive quality assessment. Nonetheless, Chinese students' personal development falls short of expectations. Based on previous research, Chinese Education Bureau, and official IB data, this paper reviews the literature and compares the evaluation methods of IBDP courses and local Chinese high schools from an internal and external perspective. The results indicate that exams continue to constitute a significant portion of the assessment method in China's local secondary schools. However, the evaluation method that focuses primarily on assessing students' personal qualities is highly subjective, and most students and teachers continue to ignore it. In China, local high schools are evaluated in an insufficient manner. In China, students enrolled in local high school courses demonstrated inferior academic performance, learning ability, and mental and spiritual development compared to those enrolled in IBDP courses.

Keywords: IBDP, student assessment, Chinese local high school, comprehensive quality evaluation, Gaokao.

1. Introduction

In China, examinations have become the predominant method of evaluation. This method of evaluation can identify a large number of talents in a short period of time, but it is monotonous and rigid, inhibiting the personal development of students. Students require more spiritual and psychological development and guidance, especially after they have mastered the basics.

In addition, the government has realized that exam-based evaluations are unsuitable for the future. Consequently, they advocated for a focus on quality education in the late twentieth century. Students no longer passively receive information from their teachers. The government and teachers encourage them to explore and participate in social practice activities, enhance their ideological and moral character, and advance in sports, art, and other fields. The Chinese Ministry of Education proposed in 2014 to improve and strengthen the comprehensive quality evaluation of students. Some schools and teachers have not implemented the new guidelines effectively until 2021.

Over the past decade, the number of IBDP schools in China has multiplied. In China, relevant IBDP curriculum literature and research papers are still insufficient. Numerous previous papers primarily introduced the single subject in the IBDP in terms of course content and instructional strategy. However, few studies have directly compared student evaluations of local high schools to IBDP in China. The majority of authors who conducted a comparative analysis of the two courses were Chinese academics. Consequently, numerous previous papers have conducted a comprehensive investigation and analysis of the curriculum system in China, whereas the IBDP student assessment was not conducted in depth. With the reform of curriculum contents, such as China's new college entrance examination policy and new curriculum standards, certain literature on China's curriculum system is no longer relevant.

This paper compares the effects of the International Baccalaureate Diploma Programme (IBDP) and the central assessment of Chinese local high schools on students' academic performance, learning ability, and psychology.

2. Assessment methods in local chinese high schools

2.1 Internal Assessment: Comprehensive Quality Evaluation

Since 1987, when quality-focused education was first proposed, the Chinese government and related institutions have paid more attention to students' overall development. Comprehensive quality evaluation has entered the stage of reflection and development since 2014 [1]. Simultaneously, the status of comprehensive quality evaluation in high schools has improved as a result of education reform initiatives such as the new college entrance exam and the new curriculum standard.

In Chinese secondary schools, the internal comprehensive quality evaluation can be divided into two parts. One component is the evaluation of academic performance, which includes midterm and final exams, as well as regular test and homework scores. This evaluation typically comprises a greater proportion of the overall evaluation. This proportion can range between 50 and 80 percent in the majority of schools' overall evaluations. The aforementioned examinations are primarily written by teachers within the school. The majority of them are subject-matter educators. Unlike the national exam, school teachers can select the test location and level of difficulty based on the students' grades and progress. In almost all schools, however, the questions on these tests are derived from previous Gaokao or other significant examinations. Therefore, if the outline is not modified frequently in terms of the question type and the perspective of the investigation's subject matter, the knowledge points awarded to students and their output are always monotonous.

The remaining percentage is determined by the student's characteristics and performance. This section of the evaluation may consider students' classroom performance, activity performance, personalities, and other factors. This section evaluates the students' artistic skill, social practice ability, morality and character, and physical fitness. However, the number of activities varies by school status and type. Typically, the number of activities in normal schools is lower than in key schools, meaning that students in normal schools have less opportunity to be evaluated and cannot demonstrate more of themselves. This portion of the evaluation will be more subjective than the academic performance mentioned previously. It is difficult to express the quality of students' performance with data, so evaluators prefer to score students' performance based on their own observations.

In addition, although the new policy encourages students to increase the proportion of self- and peer-evaluation in relevant content, the class teacher remains the primary evaluator [2]. Therefore, the evaluation of quality's comprehensiveness and objectivity are still insufficient. Currently, the government has not established a comparable organization to oversee the evaluation's fairness and accuracy. Due to this, schools and students do not devote as much time and effort to this aspect as would be expected. The objective of establishing a comprehensive quality evaluation is admirable, but it is not yet fully developed.

2.2 External Assessment: Unified Exam

In China's high school learning stage, three examinations are essential and necessary: the qualifying test, the grade examination, and the college entrance examination (Gaokao in a narrow sense). These tests are consistent and fairly administered. China introduced the concept of general Gaokao for the first time in 1952. The central government determines the questions for the standardized exam and enrollment. The Gaokao has undergone numerous reforms, with the most recent occurring in 2014 and emphasizing the concepts of grade examination and passing examination. The Gaokao is the most fundamental examination in senior high school. Typically, the qualifying examination begins in 10th grade. General examination topics in Grades 10 and 11. These subjects, which include technology, information, and art, will not appear on the college entrance exam or college entrance exam. The passing examination is less difficult than the other two examinations. It

aims to assess students' fundamental learning skills. 60 out of 100 is considered an acceptable score. If the student does not have at least 60 points, he will not graduate. If a student fails a subject, he has the option of retaking the exam.

For grade exams, however, students are not required to take so many subjects [3]. Students must select three courses from physics, chemistry, history, biology, geography, and politics, based on their strengths, interests, and intended major. Students receive grades between A and E. Unless extraordinary circumstances arise, the grade examination will be held each year in May. The grades will factor into the admissions score.

In June of each year, students in grade 12 typically take the college entrance examination. In the interest of fairness, the Ministry of Education will choose to administer the examinations concurrently. In addition, there is a stringent procedure for paper setting and exam inspection. However, due to the substantial differences in educational resources and levels between regions, provinces, and cities, the examination papers are of various types. Currently, 24 provinces or cities serve in a national capacity. Unique papers are produced in Shanghai, Zhejiang, Jiangsu, and other regions with more talent and educational resources. Additionally, there are various points for each region. Countries use such strategies to reduce regional disparities.

Since reform and opening up, China has hoped to combat social inequality through education [4]. The purpose of these standardized exams is to reduce inequality and provide equal opportunity to all students. These students may have diverse familial and cultural backgrounds, as well as educational resources. Nonetheless, the college entrance exam has the potential to alter their lives. In addition, the government will award additional points to certain children of martyrs, ethnic minorities, and other special groups in an effort to close the gap. Therefore, the country and students have always regarded Gaokao as the most important direction for high school efforts.

3. Assessment methods in ibdp schools

3.1 Internal Assessment:Research Oriented Tasks and Classroom performance

Internal assessment broadly refers to the evaluation of students by school faculty. The Internal assessment administered by IB officials (IBO) is more likely to score students' short-term assessment, which will comprise 20%-50% of the final IB score [5]. Despite the fact that daily performance is not included in the final IB score, the author of this article believes it merits mention.

There are seven types of internal evaluation. Individual Oral (IO), experiment, fieldwork, and portfolio are the most common five forms of internal assessment given by IBO. There are only oral exams in language classes. Examining knowledge of texts and global issues is common. Students must communicate with the examiner for 10 to 20 minutes. The experiment is utilized in scientific disciplines including chemistry and biology. Students are expected to independently design experiments and compose reports. In mathematics, students will conduct investigations. In the subjects of individuals and society, fieldwork is more prevalent, whereas portfolios are typically presented in art classes. Project and Artistic performance are the last two items that are uncommon in China. These tests are initially graded by the subject teachers of the students. Nonetheless, since the objectivity of internal evaluations can be questioned, the IBO will conduct random sample checks to ensure that the grades earned are reasonable.

Although the final IB grade does not take into account the student's daily performance score, teachers consider it to be one of the most important factors when estimating the grade. In addition, the estimated score is an essential consideration when applying to college. Students' grades are based on their classroom performance, learning attitude, homework, and active assignments. The proportion of these assessment components varies by subject instructor. Multiple evaluation strategies, such as flipped classrooms, group projects, and individual presentations, will be implemented for each class activity and homework assignment. Teachers typically use the IBO-provided websites to assign homework, calculate the percentage and data of students' daily scores, and reveal them to students.

3.2 External Assessment:Exam

The exam is the most common format for the External Assessment. Most IBDP schools in China administer their major exams in May. Although students only take exams in six subjects of their choosing, exams typically span 15 to 20 days, with each day divided into morning and afternoon sessions. According to the requirements of various subjects, there are numerous variations in exam question types. In addition to the standard short answer and multiple-choice questions, several vital question types exist: data response question, text response question, essays, case-study questions and structured problems [6]. Additionally, the number of papers varies between subjects. For instance, students who select Math Standard Level are only required to take Paper1 and Paper2, whereas those who select Math High Level must take three papers.

In evaluating examinations, IBO adheres to three criteria: significance, fairness, and dependability. IBO accomplished these three objectives by educating the Principal Examiner (PE) and implementing the assessment Cycle. All PEs are global experts in a variety of academic fields. Before becoming an official PE, an individual must complete official training. During the training, they will learn how to use the assessment tools, assign accurate scores, continue to practice assessments, and ultimately earn their PE certification.

Regarding the examination procedure, IB has been utilizing the assessment cycle examination system. Their operation mode is depicted in Figure 1 on their official website. Exam preparation typically takes IBO 18 to 24 months, making it the longest stage. To establish a reasonable boundary and create a fair and reliable test standard, they must collect data on student performance, evaluate students over time, compare the situations in various countries, and receive feedback from teachers.

Every year, IBO updates data and conducts reflections, which is the primary reason for the cycle's successful operation. They appreciate feedback from students and educators. If the student disagrees with the results, the Enquiry Upon Results Service can be activated and the IB Examiner can be reevaluated.

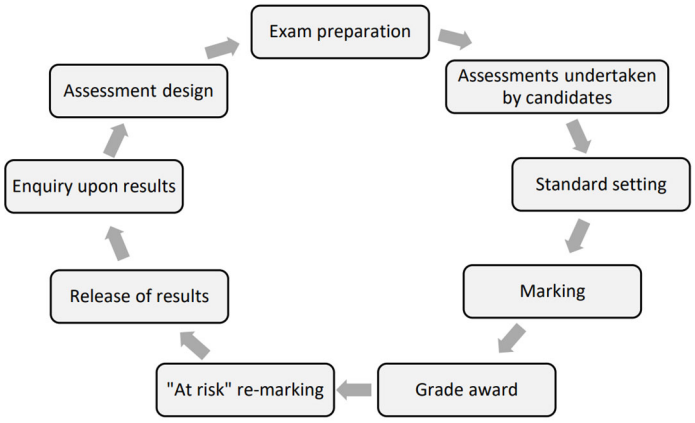


Figure 1 Exam assessment cycle of IBDP[6]

3.3 Core Subject Assessment:TOK,EE and CAS

External assessment is also utilized in the core subject, but it is highlighted due to the core subject's uniqueness and similarities. Extended Essay (EE), Theory of Knowledge (TOK), Creativity, Activity, and Service make up the bulk of core courses (CAS). In the EE, students must select a subject and topic and compose a four-thousand-word essay [7]. The new TOK curriculum requires that students combine knowledge questions with three actual objects for an exhibition. In addition, they must combine two knowledge areas to discuss a knowledge problem and compose a 1,600-word essay. IBO requires students to complete 3 to 4 hours of CAS per week. Students can fulfill CAS requirements through campus clubs and large events.

Preparation, interview, and reflection are the three essential phases. In TOK and EE, students must write their thesis outline, whereas in CAS, they must write a Proposal and Purpose for an activity.

Students are required to interview their teachers throughout the course. Academically or periodically, students must communicate and provide feedback with the teacher, who will document the interview process and provide specific evaluations. This is a phased review of the reflection phase, which typically occurs prior to or after the interview.

TOK and EE have clear regulations for submission to IBO for evaluation by global examiners in these three assessments. Additionally, these two sections can be digitized. Students are required to upload online reflections and photographs as CAS evidence. All three sections include an external marking component, but also emphasize student-teacher communication in schools.

4. The effects of different assessment methods in local chinese high schools and ibdp schools

4.1 Effect in Academic Achievement

In terms of academic performance, the evaluation method of local high schools in China enables students to achieve positive outcomes quickly. According to Bao Wei's article, college students from Zhejiang and Shanghai stated that due to the new college entrance examination's emphasis on course selection, some students who chose both liberal arts and science subjects in high school for their hobbies or high test scores would require additional knowledge if they wish to concentrate on only one subject in college [8]. Students are expected to be well-rounded under the IBDP, but there is no evidence of academic underperformance in college.

As China develops rapidly but continues to have a high demand for talent, many high school students work hard solely for the Gaokao, despite efforts by education authorities to reduce the concept of exam-focused education. As a result, they quickly enter a state of relaxation and forget pertinent academic material after the college entrance exam. In contrast, IB is unrestricted and government-funded, so students are not required to study for exams. After entering universities, Feng Yi's research indicates that IBDP students have higher overall average scores and graduation rates than non-IBDP students. IB students have an advantage over Chinese students in continuing and long-term university studies.

However, China's exam-based assessment system has helped to reduce regional disparities in educational attainment. In Bao Wei's paper, he reiterated that the reform of the new college entrance examination has led to a decline in the academic performance of students in Jiangsu and Zhejiang. Zhejiang and Shanghai academics are incapable of adapting and converging due to periodic testing and fragmented knowledge. In the meantime, the Gaokao admission rate in central and western China fell by a percentage point relative to the national average in 2017 compared to 2016, indicating that this assessment can help narrow the educational divide [9].

4.2 Effect in Academic Achievement

According to the new curriculum standard, the new college entrance examination, and other concepts, comprehensive quality evaluation should best reflect academic competence in China's local high school education evaluation. Nonetheless, as stated in Sections 4.1 and 2.1, China continues to have a high demand for talent, and quality evaluation remains imperfect. The level of trust and reliance on comprehensive quality evaluation by students is low [10]. This evaluation method is currently only useful for a small number of students seeking admission to prestigious colleges and universities. In addition, when evaluating the most qualified applicants, colleges will place a greater emphasis on their interview performance. In Chinese local high schools, comprehensive quality evaluation still does not play a significant role.

Internal assessment and core courses for IB students have been developed in a comprehensive and varied manner. Students therefore rely more on these assessments. In IO, IA, and EE, writing and research occupy a significant portion of the curriculum, and students must independently read literature and design experiments. IB students' writing and reading skills are enhanced. In TOK,

students are expected to approach knowledge with skepticism and employ critical thinking. As students learn the fundamental concepts of TOK, they can subtly apply them to other subjects or studies.

In IBDP courses, learning ability generally develops gradually over time and course progression, with no upper limit. Constant reflection and teacher leadership are required. Nonetheless, local Chinese secondary schools emphasize the necessity of learning ability. For instance, the nature of the passing exam is to require students to meet the essential student ability standard. Alternately, a large number of new information questions must be answered based on students' comprehension and reading ability on the new high school entrance exam. Students must be able to achieve their abilities, but teachers and schools do not require further development of learning skills. Thus, in IBDP, evaluation serves as a measure of learning ability, whereas in Chinese local high schools, learning ability serves as a sort of pass to evaluation.

4.3 Effect in Psychological Growth

In terms of senior high school students' mental health, both Chinese local assessment methods and IBDP assessment methods exert relatively high psychological pressure. Exams are the primary source of stress for local Chinese students, whereas IBDP students must plan their time to complete CAS and write papers and reports. However, problems such as depression are more prevalent in Chinese local high schools than in IBDP schools. According to the preceding, it is not difficult to conclude that the evaluation method of Chinese high schools is too singular, and that students' independent learning abilities and communication with teachers are deficient. IBDP evaluation methods are diverse and emphasize students' initiative to acquire knowledge. In contrast, Chinese students have a more passive learning style and are frequently unable to make independent decisions.

In terms of self-perception, the Chinese education system continues to improve. The new college entrance exam requires students to conduct a self-analysis and prepare to select courses in Grade 10. Therefore, their career planning and educational objectives are more straightforward than those of their predecessors. The government encourages them to transform their passions into strengths and advantages that will benefit their future college majors and careers [11]. IB students have always held a self-perception advantage. Similarly, IB students may select pre-DP prior to enrolling in DP courses. In China, the majority of pre-DP courses are studied in 10th grade. Students can use the academic year to participate in a variety of clubs and courses and to make career plans.

In contrast to local assessments in China, IB students are evaluated not only as individuals, but also as global citizens. This can be reflected in Internal Assessment and subject-matter assessment methods. For instance, students will be asked their opinions on global issues using IO. In TOK, students are required to analyze and prove knowledge problems using cultural examples from various regions. Additionally, the IBDP emphasizes interpersonal communication and feedback. In Exam, students and teachers can provide feedback to IBO, and it is common for students and teachers to communicate feedback during thesis writing. Students become more independent and self-assured as a result of these assessments' encouragement of independent development, exploration, and expression of opinion.

5. Conclusion

According to the aforementioned research, the evaluation method of the IBDP curriculum is more diverse and thorough than that of the local Chinese high school curriculum. Local Chinese secondary schools are still evaluated primarily based on tests. IB has three more core courses and research Oriented Tasks than Chinese local high school assessments, which is why IBDP students have greater advantages in learning ability, academic performance, and psychology than Chinese high school students. The majority of these sections emphasize students' capacity for reflection, planning, and implementation. It teaches students how to learn so that, in terms of results, the majority of IB students

continue to perform well and even excel in university. In addition, they are encouraged to communicate with teachers and express their opinions in order to boost their self-assurance.

China's social and economic development has accelerated for decades, but education cannot be accelerated in a short period of time. China still requires examinations to weed out a large number of talented individuals. Other assessment methods are not taken seriously because schools and students place too much emphasis on the importance of tests. In addition, the government did not conduct rigorous inspections and oversight of the comprehensive evaluation of quality. However, IBO places a high value on academic integrity and the personal development of its students, which is one of the reasons for the significant difference between the two types of students. If the Chinese government wishes to increase students' focus on comprehensive quality evaluation, it can increase the proportion of evaluations and exercise effective oversight.

This study examines and contrasts the IBDP curriculum evaluation method with that of Chinese local high schools, as well as incorporates the recent modifications to the evaluation method in China, to provide more timely information for future researchers. This literature can assist Chinese educators in refining their assessment procedures. Due to the lack of data, this study relies heavily on a review of the relevant literature. In the future, more primary data can be collected based on the new assessment content.

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