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A Discussion on the Issue of Excessive Academic Burden among Middle School Students

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Abstract: At present, the heavy academic workload of middle school students is a common problem, which is still questioned by parents, concerned by the government, and hotly debated by society. This paper summarizes the following eight aspects: the difficult content of subject courses, excessive class hours, heavy homework burden, complicated exams, overwhelming study materials, fierce subject competition, prevalent off-campus tutoring, and poor physical and mental health. Recognizing these problems can help to optimize the education and teaching environment and achieve a sustainable enrollment rate.

Keywords: Middle school students; Excessive academic burden; Discussion

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1. Introduction

Middle school students are in a formative stage of life, with developing bodies, maturing minds, increasingly complex emotions, and slowly forming values. They have many opportunities but also face the challenges of academic pressure.

The academic burden refers to the tasks that students are expected to complete and the resulting physical and psychological pressure experienced in the educational process. An excessive homework burden arises when learning tasks imposed by family, school, or both exceed standard curriculum requirements, placing an undue load on students. This excessive burden can harm students' physical and mental well-being. Although the government and educational authorities have consistently advocated for a liberal education approach to alleviate secondary students' academic burdens, the policy's intent often falls short in practice, constrained by the competitive demands and limited timeframe of secondary school admissions.

The issue of excessive homework burdens on middle school students remains a major concern for parents, government, and communities. Drawing on thirty-five years of teaching experience, the author identifies eight main contributing factors: challenging course content, excessive class hours, heavy homework loads, frequent exams, overwhelming study materials, fierce subject competition, prevalent off-

campus tutoring, and insufficient attention to physical and mental health. By understanding these issues, we can identify effective solutions, optimize the educational environment, and ultimately achieve a sustainable and balanced graduation rate [1].

2. Difficult content of subject courses

2.1. Challenging content of selected materials

Some of the material selected by editors is challenging to comprehend, with vocabulary that is often obscure. For instance, Geng Lin's essay, "On 'Wooden Leaves," included in *General High School Textbooks, Chinese Compulsory, Volume 2* of the People's Education edition, presents no issue for first-year high school students to remember its two artistic characteristics of "wood." However, understanding the foundational features of ancient poetry, considering their limited experience with it, is clearly difficult for students at this level. Another example is Chengzhang Liu's work, Ansai Waist Drum, which includes phrases like "a group of Mao tengteng"—a regional dialect term that exceeds the cognitive stage of students and is unfamiliar to those from other areas. High school textbooks containing such complex materials and vocabulary leave students with confusion, making comprehension challenging and creating mental barriers. This issue is particularly noticeable during self-study, where students often face many unresolved questions, leading to feelings of unease and frustration.

2.2. Difficulty in adjusting the content

Between 2011 and 2014, the author used Cantonese-language Chinese textbooks for senior high school. The most notable challenge was completing the required four volumes of the Chinese curriculum for first-year students, while also managing local monthly exams, mid-terms, finals, and grading—all within a limited timeframe. What was the solution? The only option was to select key units, deciding which lessons to prioritize, which proved challenging for individual teachers. Ultimately, the lesson preparation group had to coordinate and agree on a unified approach. Currently, the author is using the People's Education edition of high school Chinese textbooks and encountering similar issues. Recalling the teaching experience in 2004, when teaching the third-year cohort, the first five semesters were dedicated to completing the five required textbooks, while the final semester focused on key texts such as "Baoyu Gets Beaten," "Copy Inspection of the Grand View Garden," "Report on the Book," and "The Biographies of Lian Po and Lin Xiangru." This was followed by basic, special, and comprehensive training, along with three mock exams, giving students a week to rest before the university entrance exams. The teaching and learning process was calm and well-organized, and the alignment between the three mock tests and the university entrance exam results was remarkably consistent.

2.3. Difficulty grasping textbook content

With such an extensive volume of teaching materials, teachers often struggle to identify key points, address challenging concepts effectively, or avoid either delving too deeply or over-complicating straightforward content. Certain textbooks also pose interpretative challenges, such as whether Xunzi's *Exhortation* qualifies as an argumentative essay. According to Zhenguo Yuan's "International Comparative Study Series on the Difficulty of Science Textbooks in Primary and Secondary Schools," our country's textbooks generally rank at a moderate difficulty level. However, in actual teaching, teachers sometimes overlook students' developmental and cognitive readiness, adding material too quickly and increasing textbook complexity. This

often leaves students learning passively, overwhelmed by the demands. Experts have advised that we "adjust textbook content and scientifically design curriculum difficulty" ^[2], offering insights that are sharp, rational, and cautiously articulated, with mature perspectives for a balanced curriculum approach.

3. Excessive class hours

3.1. Longer actual class hours

The weekly schedule for core subjects like Chinese, Mathematics, and English typically includes six classes for junior high and five for high school. However, the actual arrangement often exceeds these limits, with an additional session for morning reading and three sessions for evening self-study, significantly surpassing standard recommendations. The Regulations on School Health Work state that students should study no more than six hours daily in primary school, eight in secondary school, and ten in college [3]. However, secondary students often face a grueling schedule with five morning classes, three in the afternoon, one early morning class, and three evening sessions, leading to exhaustion for both students and teachers. To improve well-being, it is advisable to limit students' schedules to four classes in the morning, two in the afternoon, and two in the evening, allowing more independent study time. This enables students who are motivated to pursue their studies autonomously, supporting balanced learning.

3.2. Persistent class-time occupation

Many teachers extend classes or "rush" lessons, leading to prolonged classroom time without giving students the necessary mental and emotional reset. While teachers appear proactive, students often fall behind in adjusting their mindset and resting, resulting in diminished motivation and creativity. The habit of rushing to complete lessons, especially among teachers within the same subject, artificially intensifies academic pressure, which can adversely impact students' performance in critical exams. This unscientific practice affects students' balanced growth and burdens teachers, ultimately impacting students' well-being and engagement.

3.3. Excessive class hours

Some teachers feel that their class explanations are insufficient, so they often use afternoons or weekends to "fill in gaps." This practice has become more common, especially in closed and semi-closed schools, where extra weekend sessions are scheduled for the whole school, ostensibly to support struggling students. However, this overload leaves students with no room to relax and forces them into "lazy" or "procrastinating" behaviors due to sheer fatigue. While recent curriculum standards have not reduced academic requirements and textbooks are more comprehensive, the current approach of adding extra classes strains students, creating inevitable academic and psychological pressure.

4. Heavy homework loads

4.1. Excessive quantities

Science classes impose a regimen of "three exercises" daily: morning (before breakfast), midday (after lunch), and evening (after self-study). This intense repetition leaves students exhausted, often with red eyes. Similarly, "three readings"—morning (before morning exercises), midday (before breakfast), and evening (before self-study)—result in students with dry mouths and hoarse voices. During the author's seven years

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of junior high teaching, this practice was widespread, especially in rural areas. In recent conversations with colleagues, it was found that the homework load has decreased somewhat, which is encouraging. Yet, a 2015 survey revealed that over 78% of junior high students' homework time exceeded the standard, and more than 80% spent extra time on weekends on assignments [4]. The practice of using endless assignments and extended hours, especially in the final years of junior and senior high, has left middle school students truly worn out.

4.2. Increased difficulty

As students advance through secondary school, the volume and difficulty of homework escalate, requiring more critical thinking and problem-solving. Some teachers assign a high volume of complex tasks to be completed quickly, and certain public schools include advanced problems, such as Olympiad-level math, in exam preparation. While intended to challenge students, these high standards often overwhelm them, reducing their motivation. The author notes that in their teaching area, Grade 10 students face an initial Chinese test modeled on a college entrance exam paper, making it tough for students to keep up. Such challenging assignments and frequent tests consume significant after-school time and amplify students' psychological pressures.

4.3. Homework penalties

Students face penalties if homework is incomplete, incorrect, or missed: error corrections, redoing assignments, or duplicating tasks multiple times. For disciplinary infractions, such as class misconduct or disputes, students may be required to rewrite texts several times. Some homeroom teachers employ a "one person's mistake, everyone is punished" approach, which burdens the whole class and intensifies interpersonal tensions. These harsh and repetitive measures create additional stress for students and can confuse them further. At the author's current school, it was seen teachers assign physical penalties, such as running laps, even in hot weather. One must question the purpose of such methods—what is the ultimate educational goal of such "magical" tactics?

5. Complicated examination

5.1. Weekly and monthly tests

Weekly and monthly exams have become a tradition in many secondary schools, often at the insistence of school administrators or due to teachers' constraints on lesson planning and student performance. In schools following semi-closed or fully closed management models (sometimes described as semi-military or fully military), these exams are particularly prevalent. While intended to monitor progress, they infringe upon students' self-study and extracurricular time and disrupt teachers' planning and teaching. As a result, students feel pressured and constantly anxious, and teachers are left rushing to meet curriculum milestones. This atmosphere undermines the "autonomy, cooperation, inquiry" model of learning, leaving little room for innovative, self-directed study.

5.2. Midterm and final exams

Midterm and final exams are intended to be reasonable, legal, and standardized assessments for basic education schools each semester. However, the overwhelming number of tests leads to boredom among both teachers and students. Poor management and organizational issues further exacerbate the situation,

causing many to undervalue the significance of these tests, which are designed to assess students' learning and selection abilities. This phenomenon can be attributed to the inherent limitations of human energy and concentration. Prolonged periods of focus inevitably lead to fatigue, and the relentless succession of exams detracts from students' performance on the day of testing. Furthermore, many school administrators are negligent in overseeing the key processes of examination, marking, grading, and summarizing results. Some leaders who also undertake teaching responsibilities may prioritize their reputation over educational integrity. This can lead to principals exerting undue influence over test results to maintain their authority, resulting in a chaotic testing environment that exhausts teachers and students alike.

5.3. School and joint examinations

School and joint examinations serve as essential components of the assessment process. School exams are internal assessments where students may need to correct mistakes in exam questions during their responses. Following these exams, there are regular debrief meetings where teachers evaluate their performance, often leaving both educators and students feeling exhausted and disheartened. Joint examinations, conducted by district educational authorities at the end of each term, aim to evaluate the teaching standards across similar grades within the district. These tests are generally well-organized and beneficial for assessing educational quality. However, the terminology associated with various assessments—such as "Unit Test," "Special Subject Test," "General Review Test," and "Mock Test"—often leads to a saturation of exams that overwhelms both teachers and students. In this environment, teachers find themselves rushed and stressed, while the overall atmosphere in schools becomes oppressive and grim. Ideally, assessments should be engaging and supportive of a joyful learning experience; however, the current model often undermines this potential, leading to a challenging educational climate for all involved.

6. Overwhelming study materials

6.1. "New curriculum synchronous workbook"

Designed according to updated curriculum standards, this high school workbook divides each Chinese text into "Self-Study Questioning Before Class" and "Classroom Inquiry Evaluation" [5]. The former comprises steps like "Record-Analyze," while the latter includes "Guide-Debate." While the workbook emphasizes fundamental knowledge and skills, it lacks the structured "Unit Knowledge Review" and "Ability Integration" sections found in other resources like Houxiong Wang's *Complete Interpretation of Textbooks*. This absence particularly impacts advanced students, who may struggle with self-study and exam preparation, as it provides limited resources for college entrance exam practice.

6.2. "Synchronous guiding plan, homework"

These materials are structured based on textbook sequences. Each text includes assigned "Homework," and each unit culminates in a "Unit Compliance Test." The homework generally consists of "Foundation Consolidation," "Reading Appreciation," and "Language Expression," while the unit tests include components such as "Discourse Text Reading," "Literary Text Reading," "Language Use," and "Writing." However, the synchronization between the "Foundation Consolidation" materials and the corresponding textbook content is inadequate. Additionally, the alignment between the "Unit Compliance Test" and the relevant unit learning content often deviates significantly, resulting in a disconnect between what is taught and what is tested. Compared to exercises from resources like Jinxing Xue's Complete Explanation of Middle

School Textbooks, these materials fail to provide exercises that are closely related to the teaching content. The problem-solving ideas and processes are often imprecise, and the methods presented are not flexible enough. This situation can hinder the development of students' critical thinking skills and may instill a sense of anxiety or fear when faced with challenging material.

6.3. "Secret volume," "question bank," and others

Today's educational landscape is inundated with a plethora of supplementary materials, often branded with enticing titles such as "Golden Key," "Master," "Champion," "Treasures in the Palm of One's Hand," and many others. These resources are often marketed to capitalize on students' and parents' desire for academic success, sometimes prioritizing profit over genuine educational value. In many schools, teachers struggle to keep up with the myriad of materials ordered for each subject. As a result, students find themselves overwhelmed, their focus waning under the weight of excessive content. Parents, in turn, feel compelled to sift through this information at home, leading to frustration and dissatisfaction. The sheer volume of available teaching materials encroaches on students' learning time, tarnishing their genuine curiosity and passion for knowledge. Rather than fostering a love for learning, this environment can stifle enthusiasm and ignite resentment towards the educational process. It is crucial to expose the practices within the education industry that prioritize profit over the well-being of students, warning against those who exploit this situation for gain.

7. Fierce subject competition

7.1. Competition between different grades in the same subject

Knowledge in each subject has a foundational starting point that must be built upon over time. Students in different grades face varying requirements for knowledge acquisition and training objectives. As a result, student learning is a continuous process that centers on teacher guidance, highlighting the long-term and ongoing nature of teaching work. However, when competition arises between different grades in the same subject, the test results of students become a measure of teacher performance and job evaluation. This practice fosters a defensive mindset among teachers, leading to suspicion, rejection, and even slander among colleagues across different grades. Such a climate can obstruct the vertical coherence of the subject curriculum, breaking the continuity of students' learning journeys and undermining follow-up observations and continuous training. This "rat race" mentality ensnares numerous teachers in unnecessary rivalries, creating conflicts and confusion. The negative impact extends to students, who may experience anxiety and frustration as a result of this competitive environment, hindering their overall development and academic growth.

7.2. Competition between the same subjects in the same grade.

Teaching is inherently complex and demanding, requiring teachers to dedicate their full attention and energy. Each teacher operates with a degree of independence and individuality, which can lead to a closed-off and conservative mindset. This competition among teachers within the same subject and grade is inevitable, often resulting in a tit-for-tat dynamic that fosters a climate of rivalry. When competition escalates, individuals with ulterior motives may exacerbate tensions, leading to confrontations among colleagues. Consequently, collaborative efforts, such as lesson-preparation groups, become ineffective, and meaningful discussions about teaching practices are hindered. The shift towards a cooperative teaching model—emphasizing collaborative research and development—becomes merely theoretical, with little practical application [6].

In this environment, teachers may focus solely on fulfilling task-oriented teaching responsibilities, often neglecting students' feelings and learning needs. Newer teachers may struggle to receive guidance from their more experienced counterparts, resulting in a lack of support and collaboration. As a natural consequence, students are burdened with heavy academic loads, leading to increased stress and a diminished quality of their learning experience.

7.3. A variety of other competitions

Teachers differ in their knowledge, skills, thinking, and inherent qualities, leading to diverse approaches to grasping teaching materials, processing content, and designing lessons for the same subject. This diversity can serve as a valuable teaching resource, fostering collaboration and the development of teachers' professional knowledge and skills. However, it is not uncommon for teachers to exhibit indifference or hostility toward one another. Such attitudes can stifle sincere communication and collaboration, undermining the optimization of teaching practices and ultimately affecting students negatively. When teaching resources are strained, it becomes impossible for teachers to find joy in their work, and students cannot thrive in a comfortable learning environment. Moreover, the increasing prevalence of competitions, such as the "Mathematical Olympiad," adds to the already heavy burden of middle school students, consuming valuable time and energy. Off-campus competitions often further strain students by involving parents and generating additional expenses disguised as awards, thereby exacerbating students' academic pressures.

8. Prevalent off-campus tutoring

8.1. Training from outside institutions

With the rise of the knowledge-based economy, increasing family incomes, and a cultural emphasis on hard work, alongside the government's initiatives for "burden reduction," off-campus tutoring institutions have proliferated. Faced with the "mythical beast" of academic demands, parents often feel compelled to enroll their children in these external training programs. According to research conducted by the China Youth Research Center on "The Development of Chinese Children and Adolescents," there has been a significant increase in the time students spend in extracurricular classes. In 2015, students spent an average of 0.8 hours in extracurricular classes on study days and 2.1 hours on weekends ^[7]. This trend indicates that after-school tutoring time in China already leads the world and continues to grow. These training programs often adopt a preemptive teaching approach, presenting content that significantly exceeds the curriculum standards. Junior high school teachers frequently employ strategies aimed at raising average class scores, relying heavily on repetitive homework and mechanical training. This emphasis on extended study hours and heightened learning intensity leaves students feeling overwhelmed and exhausted.

8.2. Holiday school

During holidays, especially summer vacations, many parents are willing to invest significantly in sending their children to remedial classes and training programs. For most middle school students, a semester of schoolwork often leaves them in need of physical and mental adjustment, relaxation, and the opportunity to engage in activities they enjoy. However, parental expectations can weigh heavily on students, as they may feel obliged to attend cram schools to meet their parents' desires. At this time, tutoring organizations and institutions primarily focus on profit, while many instructors, often college students, may be more interested in earning extra money than in delivering quality education. This situation can stifle students' emotional well-

being, increase academic pressure, and complicate their lives without necessarily enhancing their learning outcomes. In response to these concerns, the Ministry of Education issued a "Six-Point Ban on Compensated Remedial Education" on June 29, 2015, aiming to standardize practices among public secondary schools and their teachers ^[8]. However, managing private training institutions remains challenging, as many parents' expectations and needs are not easily addressed.

8.3. "One-on-one" training

In general, "one-on-one" training tends to yield better results regarding teacher engagement and content delivery. However, this approach can be time-consuming, and in the context of extended periods of concentration, students may become demoralized and fatigued. Additionally, such training can be financially draining for parents. Despite the increased societal investment in education, students are experiencing prolonged study hours and heightened academic intensity. Parents who are drawn to the promises of "tailored" instruction and "rapid improvement" promoted by training institutions should reflect on the principles that "time reveals one's true intentions" and "knowledge is accumulated." Effective teaching considers students' individual aptitudes and utilizes the resources invested by the government, schools, and educators. It is through academic exchange among scholars and experts that meaningful learning occurs. Unfortunately, many training institutions lack essential facilities like physics or chemistry laboratories, disconnecting students from practical teaching and fostering dependency on external assistance.

9. Poor physical and mental health

9.1. Lack of exercise

The demands of further education leave secondary school students overwhelmed with homework and numerous extracurricular classes, leading to a long-term state of high stress and physical and mental exhaustion. As a result, many students find they have neither the time nor the energy for exercise. It is common for middle school students to remain in the classroom during breaks, merely stretching or shifting positions without engaging in substantial physical activity. The pressure to excel in the middle school and college entrance examinations is intense; missing the mark by just one point can mean falling dozens of places down the rankings, potentially jeopardizing their chances for higher education. Consequently, parents may have to sacrifice significantly, spending tens of thousands of yuan to secure their children's future. Investigations and statistics across multiple departments reveal that middle school students in our country are experiencing poor health, with rising rates of myopia and obesity. According to a 2016 survey conducted by the China Youth Research Center across six provinces and cities, students' extracurricular sports time falls far short of international standards, with nearly 70% spending less than one hour on physical activities each day ^[9]. The trend highlights that the lack of exercise is seriously impacting the physical and mental health of the majority of middle school students.

9.2. Insufficient sleep

In an examination-oriented environment, the pressures to achieve high marks weigh heavily on students, schools, and parents alike. With the relentless pursuit of academic success and the many challenges students face, they often find themselves with insufficient time for sleep. According to Nasreddin, an artificial intelligence education platform for primary and secondary schools, the "Stay Up Late Index" for 2016 indicated that over 80% of students in ten provinces and cities, including Chongqing and Yunnan, went to

bed after 10 p.m. ^[10]. This trend of staying up late disrupts the body's biological clock, leading to declines in physical fitness and immunity, thereby increasing susceptibility to illness. Lack of sleep also negatively affects memory, attention, and self-control among students. Additionally, sleep deprivation can contribute to feelings of depression, anxiety, loneliness, and restlessness. It is clear that insufficient sleep hampers students' ability to function normally in their daily academic lives and jeopardizes their overall well-being. This issue poses a significant threat to the healthy development of our education system and cannot be overlooked.

9.3. Inner angst

The overwhelming burden of academic demands often leads to prolonged emotional distress among high school students. Many experience feelings of loneliness and unhappiness, compounded by the pressures to perform well in examinations and meet competitive expectations. The fear of disappointing teachers and parents, alongside the anxiety of an uncertain future, can create a fog of hopelessness that demoralizes students. When they fail to complete their learning tasks or meet academic expectations, it becomes all too easy to reflect on wasted years and feel disheartened. The concept of "accompanying homework," where guardians or parents are involved in students' study sessions for extended periods, can feel suffocating. In this scenario, the emphasis on academic achievement often overlooks non-intellectual factors, inadvertently heightening students' anxiety and pressure from parents and teachers [11]. This environment has pushed some students to the brink, leading to tragic outcomes. For instance, on January 16, 2018, a second-grade student from No. 1 Middle School in Datong City tragically took his own life by jumping from a building [12]. Such heartbreaking incidents serve as painful reminders of the irreparable consequences of excessive academic pressure.

10. Conclusion

Self-restraint is an essential aspect of personal development, a skill that reflects one's character and state of mind. Seeking truth involves a conscious effort to understand and apply effective methods; pragmatism is both a mindset and a necessity. Love for one's work and dedication to responsibilities signify a commitment to excellence and a positive attitude toward the future. When individuals embrace self-restraint, truth-seeking, and pragmatism, fostering a culture of care and responsibility, they create an environment where everyone can thrive. The challenges faced by high school students overwhelmed by academic pressures can indeed be addressed. By optimizing the ecosystem of basic education and promoting green graduation rates, we can pave the way for healthier, more balanced educational experiences that prioritize student well-being and success.

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References

- [1] Green Graduation Rate, 2020, 360 Baike, viewed September 20, 2024, https://baike.so.com/doc/7631918-7906013.html
- [2] Xie Y, 2020, National Outline of Medium- and Long-Term Education Reform and Development Planning (2010–2020), Beijing National Outline of Medium- and Long-Term Education Reform and Development Planning Working Group Office, Beijing.
- [3] National Education Commission, Ministry of Health, 1990, School Health Work Regulations, Ministry of Health, Beijing.
- [4] "The Development of Children and Adolescents in China" Task Force, 2015, "The Development of Children and Adolescents in China" Survey, China Youth Research Center, Beijing.
- [5] New Curriculum Synchronous Workbook Compilation Group, 2019, New Curriculum Synchronous Workbook, Senior Chinese Compulsory Volume, Hainan Publishing House, Haikou, 1–4.
- [6] Liu Y, 2021, The New Curriculum Reform and the Construction of a Cooperative Culture Among Primary and Secondary School Teachers, 421 Fenggang County Academic Journal, (2): 04. https://www.docin.com/p-4886228. html
- [7] Sohu-Blackboard News, 2018, How to Deal with the Persistent Extracurricular Training Classes That Are Banned Despite Repeated Bans? Sohu, viewed September 20, 2024, https://www.sohu.com/a/226180459_693376
- [8] Yang M, 2015, Ministry of Education: 6 Prohibitions on Primary and Secondary Schools and In-Service Primary and Secondary School Teachers from Paying to Make Up Lessons, blog China, viewed September 22, 2024, http://net.blogchina.com/blog/article/2624226
- [9] Zhongqing Online, 2018, I Have Primary and Secondary School Students Learning Time "Leading" the World, NetEase, viewed September 25, 2024, https://www.163.com/dy/article/CE7EF9ON051696NJ.html
- [10] Observer.com, 2017, "Report on Homework Pressure in Chinese Primary and Secondary Schools": Big Data Tells You How Homework Affects Chinese Families, Sina, viewed September 20, 2024, http://k.sina.com.cn/article_18 87344341_707e96d5019003s93.html
- [11] Non-Intellectual Factors, 2017, 360 Baike, viewed September 19, 2024, https://baike.so.com/doc/6612656-6826448.html
- [12] The Metamorphosis of Educational and Developmental Views Reflected by the Moonlight and Extra-Curricular Training, 2018, Baidu, viewed September 20, 2024, https://baijiahao.baidu.com/

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