

The Negative Impact of Exam-Oriented Education on the Creativity of Adolescents in the 21st Century

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Abstract. The development of creativity in students is a crucial element of their overall growth and maturation. Creativity is an essential tool for effective problem-solving. Nonetheless, modern educational systems, which prioritize exam-oriented curricula, have created significant obstacles to the cultivation of children's creativity. Therefore, this article aims to explore the drawbacks of exam-oriented education in fostering creativity. Using the definition and significance of creativity as a foundation. Finally, this paper found that current exam-oriented educational systems hinder the development of children's creativity by depriving them of time and stifling their creative potential. As such, an education system primarily focused on examination and high scores diverges from the fundamental purpose of education, depriving children of opportunities to nurture their creativity. Therefore, the final section of this article presents suggestions for educational reforms. For example, the government needs to implement policies to alleviate student stress; Schools should offer diverse classes; Parents also need to gradually shift away from the notion that achieving high scores is the sole path to securing a promising future. These reforms could provide children with more opportunities to become creative individuals.

Keywords: Creativity; Exam-oriented education; 21st century Educational reform.

1. Introduction

1.1. Definition of Creativity

Creativity, according to Robinson, is creating a new idea. Among these ideas, there are mistakes and corrects. When the correct ideas are implemented, that's innovation [1]. Thus, creative person means a multitude of useful and novel ideas were applied. However, it is worth noting that creativity is not a term exclusive to a select few genius scientists or business tycoons; rather, it is a trait that every person possesses to varying degrees [2]. In addition, even very young children possess creative capabilities. For example, it is readily found that children commence engaging in a sequence of pretend play activities at approximately 18 months of age [3]. Wherein they pretend to assume roles such as that of a mother, with their toys representing their child. These play scenarios are typically not taught by adult-imposed rules. However, games emerge organically through the children's capacity for imitation and creative expression. Undoubtedly, Children generate ideas of assuming parental roles through imitation of their parent's behaviors. When these ideas are put into practice, they create the imaginative play. As a consequence, each individual possesses varying degrees of creativity, even during early childhood.

1.2. The Importance of Creativity

Creativity plays an important role in modern society. Firstly, for facing with unforeseen future, creative individuals possess an ability to create new opportunities in uncertain situations where others may see only obstacles [4]. As Runco said, creativity takes on a crucial role when addressing uncertainty [5]. So in today's ever-changed society, no one knows what will happen in the future. However, creativity could overcome uncertainty. Secondly, in industry, Innovation is usually the result of a group of creative participants working together, like the formulation of policies, construction of houses, and advancements in healthcare [4]. All require a creative group of individuals



to come up with new ideas and then implement them. So that human lives could not be separated from creativity. According to Montuori and Donnelly, the world is changed and the future is shaped through creativity [4].

1.3. The Purpose of Research

Creativity plays a pivotal role in the development of students; however, an increasing number of adolescents appear to be lacking in this attribute. Students have become accustomed to executing tasks in a routine, mechanistic manner, akin to automatons. The dearth of novel ideas among adolescents is not conducive to the future development of the nation. Therefore, this paper will investigate the detrimental impact of 21st-century examination-oriented education on student creativity. The aim of this study is to underscore the gravity of the issue regarding students' deficiency in creativity to national stakeholders, including governments, educational institutions, and parents, and to proffer recommendations for comprehensive rectification. It endeavors to rekindle the creative spark within children.

2. The Negative Impact of Exam-oriented Education on the Creativity of Adolescents in the 21st Century

2.1. The Disadvantages of Exam-oriented Education

2.1.1. Students are afraid to make mistakes

Exam-oriented education hinders the development of creativity in teenagers. Robinson has clearly illustrated that. He said today's education system has killed children's creativity [1]. In the previous section the definition of creativity, clearly pointed out that creativity can generate both correct and incorrect ideas. However, contemporary exam-oriented education does not allow children to have wrong perspectives and make any mistakes [1]. If children are making mistakes, they will obtain low scores in standardized testing. Especially in China, only students with excellent scores in the college entrance examination (gaokao) have the opportunity to gain admission to university [5]. So academic ability has become the yardstick for assessing the quality of students in exam-centred education. Because of this, students fear making mistakes and take pride in high scores [1]. As a result, the school system that emphasizes exams, which assess the worth of students based on high marks, indeed stifles the creativity of children.

2.1.2. Weakened students' capacity to confront uncertainty

Exam-oriented education contradicts the original purpose of education. Jerome Bruner, a psychologist, noted that the main purpose of education should be to prepare pupils for an uncertain future as early as 1960 [4]. However, modern exam-oriented education only lets students solve existing problems. Each testing question has a predetermined answer, and students can pass the exam through rote memorization [6]. For example, the equation of plant photosynthesis and Newton's second law. While conceptual knowledge is undeniably important, the focal point of education should not solely revolve around rote memorization and passing exam.

It is not difficult to find that the current educational approach is resemblance to the ancient Chinese imperial examination system, known as keju [7]. The content of these examinations relies on the rote memorization of knowledge acquired in day-to-day learning. However, it is noteworthy that the imperial examination system was abolished in 1905 due to its failure to adapt to the evolving societal landscape. That is because this method of educating children is not conducive to fostering their creativity. It is widely acknowledged that the future is uncertain and complex, and no people know what will happen. In contrast, standardized testing is just considered a certain question. In brief, contemporary educational institutions deviate from the fundamental principles of education in their approach to student development.

2.1.3. Students' time is being squeezed

Exam-oriented education deprives children of the time needed to cultivate creativity. Most of the students' time is occupied by academic pursuits and homework, leaving them with limited opportunities for leisure and play. However, play is a fundamental way for students to understand the world. That means they miss out on more opportunities to develop creative potential [3]. According to data provided by Chris, the average amount of time students in high-performing high schools spend on homework each night is 3.1 hours [8]. These data indicate that adolescents allocate a significant portion of their post-school hours to homework completion. The assignments given by teachers also serve the purpose of reinforcing knowledge for examinations. Education continues to revolve around examinations [9,10]. Consequently, this practice results in a reduction, and in some cases elimination, of the time children have for activities such as sports, exploration, and play to become creative.

2.1.4. Parents exert more pressure on their children

Parents, within the prevailing context of exam-oriented education, become increasingly oppressive towards their children. Achieving high scores on exams is often seen as the key to securing good employment opportunities and school admissions in China [11]. Therefore, parents place a higher emphasis on their children's academics, particularly in economically disadvantaged and education-limited countries. According to the Varkey foundation and published by the World Economic Forum (Figure 1), in 2018, parents spent a substantial amount of time each week assisting their children with homework. Particularly in India, where parents devoted up to 12 hours per week to homework help. Consequently, in the prevailing atmosphere of exam-oriented education, parents become stricter with their children and allocate less time for family play. In the meanwhile, parents tend to prioritize obedience over independence in their children, while creativity implies uncertainty or non-conformity. Thus, within the context of exam-oriented education, parents are increasingly averse to their children developing independent thinking or a critical spirit. This, in turn, makes it more challenging for children to nurture creativity in an unsupportive environment [3]. In brief, In the context of exam-oriented education, children lack the support from parents necessary to foster their creativity.

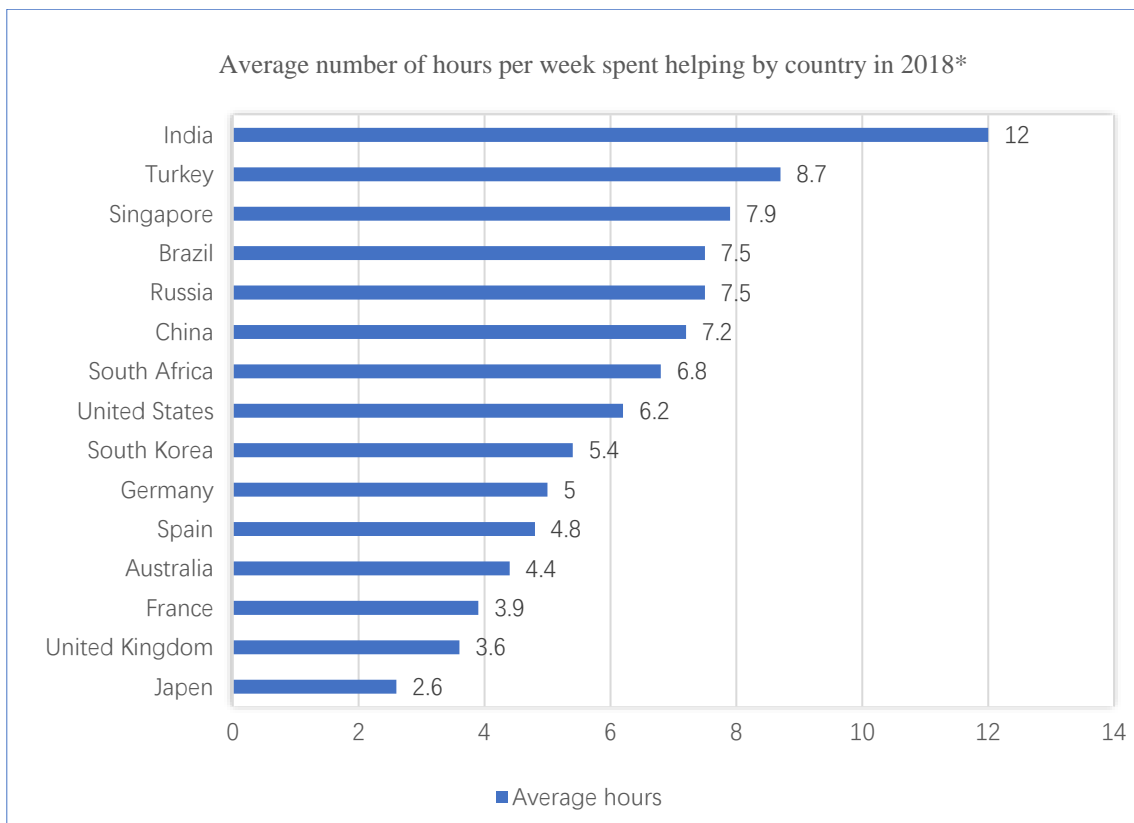


Figure 1. Where Parents Help Their Kids with Homework [12]
*Selected countries

2.1.5. Students lack practical knowledge

Exam-oriented education diminishes children's capacity for multifaceted development. It leads students to allocate a greater proportion of their attention to conceptual knowledge, often to the lack of acquiring practical knowledge. Adolescents, driven by the pressure of academic advancement, dedicate almost all of their time to the study and revision of subject-specific knowledge, such as language, mathematics, and history. However, they often lack practical skills and knowledge, such as cooking or managing interpersonal relationships. There is also a hierarchy of subjects. Mathematics and physics are at the top and art (which is more likely to foster creativity) is at the bottom [1]. But as Karl Popper aptly noted, school education constitutes only a part of education, not its entirety [13]. Hence, Practical knowledge is also of great significance. Therefore, exam-oriented education diminishes the importance of practical knowledge.

2.2. Suggestions

2.2.1. At the national level

The government should enact policies aimed at reducing student stress. For instance, (1) off-campus supplementary tutoring for academic subjects should be prohibited, so students would take more time during holidays and weekends to engage in activities they are passionate about; (2) the university admission examination system should be implemented, including the relaxation of admission score thresholds to provide more students with opportunities for choosing higher education; (3) the state should allocate more resources towards art courses rather than concentrating resources primarily on subjects like mathematics. This includes investing in the training and recruitment of additional art and music teachers; (4) the issuance of teachers' qualifications should be subject to strict criteria, and the recognition and respect for children's ideas should be integrated into the assessment of teachers' qualifications.

2.2.2. At the student level

Schools should consider (1) alleviating the burden of assessments on students to reduce the frequency of examinations. Specifically, it may be beneficial to eliminate weekly and monthly tests altogether. By doing so, students would have more time to focus on in-depth learning and engagement with course material, rather than constantly preparing for the next assessment. This approach could ultimately lead to a more productive and fulfilling academic experience for all involved. (2) introduce a broader range of arts courses, such as vocal music, drama, and poetry, to strike a balance between academic and artistic curriculum; allowing children to choose their own arts curriculum. This approach aims to nurture diverse talents. (3) To maintain excellence in the teaching field, having a varied group of well-trained educators who emphasize fostering children's creativity over strict compliance. Students' grievances against a teacher should be thoroughly examined and the teacher should be given the necessary training to enhance their skills.

2.2.3. At the parents level

Parents should change their awareness to recognize that gaining admission to college is not the sole path to a child's success. There are many paths to success, and high grades should not be the sole criteria for judging a child's worth. (2) parents should provide more support for nurturing creativity in their children. They should not be overly anxious about their children making mistakes but rather allow them to pursue their own interests. (3) parents need to engage in family activities with their children on weekends, including outdoor activities such as camping, horseback riding, and mountain climbing. These activities not only strengthen the bond between parents and children but also provide children with ample opportunities to foster their creative development.

3. Conclusion

In conclusion, this paper against the backdrop of defining creativity and emphasizing its significance has discussed how exam-focused education affects adolescent creativity. Education centred around

examinations deprives children of the time to play and engage in activities conducive to nurturing creativity. It instills fear of making mistakes, stifles independent thinking, and suppresses individual opinions in children. Consequently, the pressure on children due to exams continues to mount. Exam-oriented education severely hinders the diversified development of children. Therefore, this paper also provides recommendations on how to ameliorate this pressure-cooker environment for children, involving collaboration among the government, schools, and parents. These collaborative efforts aim to enable children to pursue diversified development. In the future, through educational system reforms, children will be better equipped with problem-solving abilities and creativity in a relatively relaxed environment.

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