

The Ethics of Competition in Education and Competitive Exams

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Abstract

Education is a significant part of the development of an individual, and has been considered an important offering for the development of the child into a productive member of society. In the transition from high school to university, in most localities, are competitive exams, necessary to rank highly in or pass in order to attend high-quality universities in the countries, usually, as the name may suggest, with competition. In this paper, a discussion will be had as to the ethics of competition in education and competitive exams, and whether the effects this competition heralds is also ethical. This paper will examine the ethics of two specific exams as well, the JEE in India and the EVAU in Spain as examples of competitive exams and to explore the potential unethicity of these exams.

1 Introduction

Competition is omnipresent in today's education systems, be it "ranking" students within their class or high-stakes examinations such as the JEE or Gaokao, which set students on a permanent trajectory for the rest of their lives.

Academic competition is conventionally seen as a simple, efficient way of sorting the academic capabilities of a large population. However, as evidenced by an increasing number of studies [Hsu, 2017] [Barbayannis et al., 2022] [Alsulami S, 2018], it can also cause stress and anxiety, as well as hurt the democratization of knowledge; or even lead to further socioeconomic inequality, particularly in high-stakes cases. Due to these factors, is it ethical to have such competition at all?

1.1 History

According to Britannica Dictionary, competition is "to try to get or win something (such as a prize or reward) that someone else is also trying to win." [Dictionary, a] It means that there are at least two people competing towards the same goal in a matching environment. By nature, all living organisms are competitive within their own species, however, the grade of behaviour in different conditions will determine the circumstances. "Some individuals are highly competitive and eager to get access to high-quality resources, while others seem to avoid competition, instead making prudent use of the lower-quality resources that are left over for them." [Bonn, 2014] Rivalry is accompanied with this type of thoughts, as they abstractly follow the same pattern.

"I shall argue that competitiveness is a widespread human characteristic and has been the driving force behind many of the most dramatic developments in history from 10,000 BC onwards." [Fisher and Wees, 2011] This quote shows the first sight of actual planned competition. Explained by this author, the studies of the history of competition will be biased and distorted by western ideologies. That might be due to the high volume of data lost in the modern era due to the beliefs generated by those who governed that caused blindness to society.

2 Education

It could be argued that education is a type of competition. Nowadays the learning conditions of all countries indirectly generate internal conflicts among students. The normalized set of schools include

tests as the way to prove the knowledge gained of one pupil. One of the common myths in education is that *exams are the fairest way to distribute society's scarce resources to the young, and hence the association of exams with the ideas of meritocracy and equality of opportunity* [Moll and Ollman, 2004].

2.1 Overview of General Systems

Education is commonly split into multiple levels, and for the purposes of this paper, it will consider British/European-patterned education, however, will also briefly mention American-styled education as well. The path of a student can be generally split into Key Stages, or into Primary, Middle and High School, with a generalized split between the 10th or 11th year, usually demarcated by a board exam such as the GCSE, then at the 12th or 13th year, which is then demarcated by A-Levels, IB or national high school exams, which end with the presentation of a relevant diploma.

3 Real life examples

3.1 JEE Exam - India

In terms of socioeconomic equality and the fairness of competition, the example of the Indian JEE can be used. The JEE is an Indian exam set by the Indian Institutes of Technology, as an admission test for IITs and NITs, which are premier institutes for the study of engineering and other engineering-adjacent topics. The competitiveness of this exam can be demonstrated by simple percentages, where nearly a million individuals took the JEE-Main, the first component of this exam, of which, only 10,000 individuals actually achieved admission into IIT, leaving a percentage of 1/100 acceptance. Around this exam, which is highly valued in the nation, is a multi-billion dollar industry of test prep, with multiple unicorns coming out of this environment, such as Byju's (valued at [USD] 22 billion, for example), Vedantu, and others, not to mention the notorious city of Kota, Rajasthan, which pulls in [USD] 500 million every year to provide training for multiple exams, such as the JEE. This clearly shows a massive amount of spending for training for exams, which would also, in turn, put into disadvantage those who are unable to pay for such training. According to (Kumar, 2016) [Kumar, 2016], "It can be concluded that SEFs influence the performance of the students in IIT-JEE." along with that "the statistics indicates that IIT-JEE does not provide a fair chance to aspirants from all the State Boards, as the pattern of the examination seems skewed towards a few boards only." Although, of course, this could be considered biased, there are other studies from a variety of nations which further this argument, as shown by the citations provided.

Each article, especially when dealing with elite institutions, provide an explanation of increased opportunity for those who are more well-off. This concept, of encouraging competition on what is essentially falsified "even ground", can be considered unethical, by the concept of equality of opportunity, whereby relevant obstacles should remain, but irrelevant obstacles, which could be classified as socio-economic obstacles, should not, for competition to be ethical (Stanford University, 2015) [University, 2015]. It could also be considered deception, which is also considered to be unethical [Tai, 2012] [Matthias, 2021]. Without establishing absolute equality, we could potentially argue that the entire system would be inherently unethical [PsychologyToday, 2018] [Aiyar and Ebeke, 2019] [says, 2018] [Satz and Reich, 2012], hence, fundamentally cannot be used with an ethical justification. Of course, there are dissenting opinions on this [Frankfurt, 2015].

3.2 EVAU Exam - Spain

According to article 38 of the LOMLOE, "In order to gain access to [undergraduate] university studies it will be necessary to pass a test which, together with the grades obtained in the baccalaureate (Year 12 and 13 in UK system; 11th and 12th Grade in US system), will assess, objectively, the academic maturity and knowledge acquired in it, as well as the ability to successfully pursue university studies." [?] This test is known as EVAU, EBAU or PAU. It is a national entrance exam for Spanish Public Universities which has the objective to measure the student abilities in a different set of subjects and skills in order to build a ranking for the different degrees that universities offer. It is structured in two phases, the general phase and the specific phase. In the general phase, four subjects are assessed, in which three of them are the same for every student: Spanish Language and Literature, Spanish History and Foreign Language. The fourth one depends on the branch chosen by the student at the beginning

of the baccalaureate; it can be Foundation of Arts, Latin, Applied Mathematics or Mathematics. Each test consists of a minimum of 2 to a maximum of 15 questions and lasts approximately one and a half hours. In the specific phase, students are examined in any of the subjects of the Baccalaureate modality. It serves to raise the grade that will position them at a greater advantage over others for university entrance and cut-off marks. This type of system to prove that the student is prepared for university is based on [Spanish] Ley Organica 3/2020, Real Decreto 310/2016, Real Decreto 1105/2014, Real Decreto 412/2014, Orden EDU/3242/2010 [Gobierno de España, 2022] [Press, 2019].

In the year 2021, 265,241 students sat the exams, making an annual average of approximately 250,000 students sitting the exams[Herrero, 2022]. The aforementioned year had the highest percentage of passing students to date at 94.2 %. This year 2022, divided by region, there is an unweighted average of 96.20 % pass rate in the autonomous regions, not including Catalonia and Andalusia[País, 2022]. There are a considerable number of students who decide to go to institutions to prepare for these exams. There are various reasons for this, but it is important to bear in mind that the teachers at these academies are usually professionals in their respective subjects, inhabiting positions which require them to have obtained the highest possible marks in the test for which they prepare their students. Most subscriptions also grant you access to previous exams or exercises and their answers, a major benefit for those who can afford it [Clemente, 2022]. It should also be noted that such institutions are not usually online, as in Spain there is a preference for physical interaction between student and teacher, so they tend to be local businesses that are known throughout the city and have a good reputation in high schools.

From an ethical point of view, students who take this test know that they are risking their professional careers, having studied for months on end only to lose everything in an exam that suffers the effects of grade inflation or bad marking, which in some cases does not seem fair. That is why there is always a period of time in which students can ask for opinions from other markers, to make sure that their score is the right one and the one they expected when they left the exam. Considering that it causes so much stress, as will be mentioned in point [6], it is not ethically correct not to offer therapy or tips to young people of these ages for such decisive moments in their lives [Sueiro, 2016].

4 Cooperation

According to Oxford Learners Dictionary, cooperation is "the action or process of working together to the same end." [Dictionary, b] Hence, it can be seen as the opposite standpoint of competition or rivalry. It involves a minimum of two individuals that are following the same objective to cooperate with their skills, thoughts, knowledge to get to the same point with advantages not seen in the competition.

Humans collaborate for immediate advantage and biological causes but for reasons that are uniquely human as well, such as honesty signaling, cultural group selection, and cultural evolution. The example of education is with the teacher providing new knowledge to the student and the student asking good questions to the teacher so they develop soft skills and critical thinking. Actually, there are some methods implemented in several countries in which schools seek a method of collaboration between students to reach a common goal, which in most cases results in a final ranking in the class by teams. One of the methodologies used is team-based project learning, where each student is paired with at least three other people and each takes on a different role for the optimal functioning of the group. This teaching extends for a period up to the mandatory assessment in standardised curriculum, which seeks to give the same grade to each team member no matter what portion of the work they have done. This is intended to generate a constantly evolving environment in which each student knows that their grade will depend on the work of others and not just their own, achieving cooperation in most cases.

Cooperation can also be considered ethical, as observed by a study in Current Anthropology [Curry et al., 2019], as cooperation is considered to be a net positive in most societies assessed. Cooperation is also considered to be good for mental health, and hence, encouragement of the same may be considered ethical as well [Relojo-Howell, 2016].

5 Game Theory

Game theory is a branch of mathematics that studies strategic decision-making. It is commonly used to study competition situations. As it has been mentioned, there are at least two humans, or in

this case, players competing to get to the same goal. They do not have the option to make binding agreements, instead each one needs to choose their own strategy to do their best and get to the goal with advantage. The goal for each player is often to find a strategy that will lead to a favorable outcome, either by maximizing their own benefit or minimizing the benefit of the other players. "One common way to analyze competition using game theory is through the use of Nash equilibria. A Nash equilibrium is a set of strategies for each player such that no player has an incentive to change their strategy, given the strategies of the other players. In other words, each player is "playing their best hand," given the strategies of the other players." [OpenAI, 2022] [Ross, 2021] [Myerson, 2014] [Osborne and Rubinstein, 1994]

Mathematics is based on logical statements on set theory, due to this, the fields related tend to be objective towards an opinion to give a general insight of what is happening and the approaches to solve it. In this case, game theory is the way to study situations where there is more than one person involved to get the null-point-view, where there's no biased perspective. From it, two positions can be taken: the players' and the observer. The observer will analyze the situation keeping in mind different factors not emotional related at all (Or if it's the case, just focusing on those) to assume the role of a judge and determine the success rate difference of both players, so a relative point can be established. Normally this is done based on criteria and equilibrium. The players' position will always be (in the common case of not wanting to lose) trying to define a strategy based on the weak points of the opponent. The direct interaction of both will define if one plan is better or the other one. It's already known that from a realistic point of view, there's no assure anticipation and the cases are subjective to changes.

This is seen as the fairest way to judge academic situations since the criteria is one for all. However it has weak points. Firstly, humans are always subjective no matter what [UKEssays, 2018]. Studies have shown that on hand-written exams, pupils with a neat calligraphy tend to get better grades as the examiners are usually more motivated to read a readable, good presented text [Jack, 2019]. According to a quote by Einstein, if the ability of a fish is only decided by its capability to climb a tree, we would be ignorant of the capability of the fish within the water [Branson, 2017]. This could be considered as a critique of this particular practice, whereby those who are unable to express certain aspects of their learning are ignored, while those with a capability of communication are elevated, regardless. This could be considered unethical deprivation of opportunity in future career [IRMI, 2022], and hence this methodology of ranking by subjectivity could potentially be unethical in extension.

6 Responsibility involved

Mental health can be defined as the absence of mental disease or as a state of being that also includes the biological, psychological or social factors which contribute to an individual's mental state and ability to function within the environment. [Manwell et al., 2015]. In terms of mental health, this type of academic competition has significantly contributed to poor mental health, according to a research paper by the University of Southern California, along with a few other articles, both journal and web, as cited.

In the Indian system, the direct effects are presented via statistics surrounding the competitive exams in the nation. According to the Times of India, the Student Suicide Rate is the highest it has been in 5 years, with many taking their lives due to failure in exams [Gupta, 2022]. It could be argued that these issues can be attributed by responsibility to numerous authorities, as an extension of external factors stated by the CDC [CDC, 2022]. Discussions of ethics in relation to this responsibility, and the extension of socioeconomic factors into this responsibility also require significant discussion. For many individuals, failing these exams can spell doom for their socio-economic situation, the inability to earn wages, and the loss of time in general. Extending this into socio-economic factors, argument could be made that the biases shown by exams, as explored above, may present an ethical question as to the appropriateness of use of such exams, when they actively may cause harm to the individuals who take them, albeit indirectly.

In the Spanish example the direct effects on pupils are presented in press conferences and articles, showing that the uncertainty that surrounds pupils at this time of year leads to anxiety and stress crises, "Some lose their appetite; others, on the other hand, feel like eating all the time. They sleep little, are irritable and, worst of all, spread the tension and bad feeling to those closest to them, especially parents, siblings and close friends" [Ibáñez Barcelona, 2014]. "For many of these young people, this is

the first time they have been faced with a limit situation” [Sel, 2020] said Andres Bellido, president of the Educational Psychology section of the College of Psychologists of Catalonia. ”The least they can feel is anxiety, especially those who need a high mark to be able to enter the degree course they have chosen”. Demonstrating that there is a clear relationship between the minimum cut-off mark in specific careers and students who have career dreams.

7 Conclusion

Throughout this paper, the JEE and the EVAU have been explored as potential examples of the competitive exam model, and socio-economic factors and mental health factors have been considered for the ethical nature of these exams. These exams were also briefly contrasted with the Cooperative model of learning, rather than the Competitive model, and the ethicality of cooperation in this context was analysed to be positive in nature. The effects of mathematical game theory was also analysed, and the ethical nature of actions in educational competition was evaluated via that discipline. The responsibility of organizations administering these exams, and the appropriateness of the use of such exams with consideration of socio-economic factors were analysed, and an inconclusive conclusion was heralded in that case, and is a topic of further consideration. The general discovery of the paper was that while these exams could not be described as totally unethical, certain practices and environmental factors surrounding these exams could be described as unethical in the sense of socio-economic equality and mental health, to name the two factors considered in this paper.

7.1 Institutional Affiliations

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