The Factors, Individual and Cultural Difference of Competition Motivation on Students

Yi Zhou[1, *]

[1] Department of Psychology, Syracuse University, New York, 13244, US

*Corresponding Author Email: yzhou153@syr.edu

Abstract. Learning motivation is the central part that stimulates students to learn. Scholars in the education and psychology field have studied motivation for a long time to develop an appropriate teaching and learning strategy for students. In contrast, many studies conducted do not have enough generalization. The paper aimed to review factors involved in a competition from the social comparison perspective and examined individual and cultural differences in competition motivation among students. The results showed that Situational and individual factors led to comparison concerns and triggered competitive behaviors. Gender and cultural differences significantly distinguished students' learning motivation in a competitive environment, while no age variation was founded. This study drew a comprehensive interpretation of the relationship between competition and the learning motivation of students. Further study about the relationship between long-lasting competitive phenomenon and motivation needs to be encouraged.

Keywords: motivation, competition, individual difference, cultural difference.

1. Introduction

Motivation is an essential cognitive mechanism in the human mind, which involves initiation, intensity, persistence, and direction in psychology. It is also the psychological process of stimulating and encouraging human behaviors. Since motivation is closely related to individual behaviors that help people achieve goals and fulfill expectations, psychologists and behaviorists have studied it for a long time. For example, the driven-reduction theory proposed by Clark Hull presented the idea that human motivation is driven by biological needs such as hunger. People will raise their motivation to eat if they feel hungry. In addition, Self-determination theory, also known as SDT, believed that everyone has three psychological needs: autonomy, competence, and relatedness [1]. When three psychological needs are supported, people adhere more to the behavior and be more well-built. Instead of psychological and biological factors that may affect people's motivation, the surrounding atmosphere could also influence motivation levels, such as competition, corporation, and rewards. Deci suggested the intrinsic and extrinsic motivation theory and indicated that human behaviors could be inspired and reinforced by receiving external rewards such as extra salary or prizes [2].

As discussed previously, motivation is the central part of human success and aspiration, and it is also crucial in the educational field that is often related to students' learning. Learning is a complex process of mental activity involving the participation of all intellectual factors and non-intellectual factors. For instance, interest, emotion, will, and other non-intellectual factors constitute the motivation system related to learning. Motivation and learning are closely related; students may result in polarity in academic performance due to high or low learning motivation. Because of the universal expectation of a great performance of students, understanding the factors that contribute to students' motivation and how they would them affect learning motivation is needed.

Competition is one of the critical contributors related to human motivation. According to Pei's research, the competition mechanism is the source of the vitality of the market economy, and the competitive incentive mechanism within the enterprise has always been regarded as an important means to mobilize the subjective initiative of employees and enhance their vitality and creativity. In addition to the application in the market, the competition mechanism could also relate to the learning motivation of students.

Therefore, the study summarized the factors involved in the competition from the social comparison perspective and psychological contributors, and individual and cultural differences in age, gender, and western and eastern education systems, respectively.

2. Factors

Competitive behavior is ubiquitous in human society. When there are a group of people or more than one person who has the same unique goal or scarce resources, competition happens. The factors that are involved in competitive behaviors in human society could be situational factors, individual factors, and comparison concerns, according to the social comparison perspective proposed by Stephen and her colleagues [3]. The combination of situational factors and individual factors, such as the number of competitors and individual differences, could lead to comparison concerns and triggered competitive behaviors. For instance, when there are relatively fewer competitors with high similarities to each other, competitive behaviors will happen. In terms of the number of competitors, studies investigated by Pillutla and Ronson found that auction bidders are more inclined to exceed their budgets when competing against a small number of bidders [4]. The phenomenon could be explained by people having a higher expectation to become the winner when there were fewer competitors, which increases competitive behaviors. In addition, the similarity between competitors could also intensify the competition, such as vegans always hate vegetarians. In general, situational factors of competitor population, social category fault lines, and individual factors of relationship closeness and similarity could all contribute to the factors of competitive behaviors.

2.1 Psychological Contributor

Except for situational factors and individual factors that could affect people's tendency to compete, the psychological states of the individual during the competition could significantly affect performance. Gaynor and John studied the influence of basketball players' confidence levels and competitive anxiety on performance. By collecting participants' self-reported anxiety and confidence levels and measuring the later competition performance, results showed that anxiety affected performance required anaerobic power, and self-confidence predicted performance involved working memory [5]. The finding suggested that the psychological and competitive states would bring various affection to the actual performance of people, which also emphasized that have a comprehensive understanding of those distinctions and arise an appropriate method to better control people's psychological status under competitive situations would be valuable to help scholars in the education field to develop strategies for improving motivation and performance of students.

Contributions of social comparison perspective and psychological states discussed in the previous content also related to educational psychology and studied students' learning motivation. Situational factors of competition could be detrimental to students' achievement motivation. For instance, the number of competitors, similarities of competitors, or even relationship closeness from a social comparison perspective played a significant on affecting students' learning motivation. Also, as mentioned above, the psychological and physical factors would account for learning motivation, and underlying positive or negative influences are deserved to study. Research by Kohn indicated that competition during class may not benefit students' academic study but may be more suitable under exam scenarios. However, the framework didn't have generalization in all educational settings since most of the research only considered western culture and individualism, and it may not be able to explain the scenarios in the eastern environment. For example, Chinese students only have one chance to take the college entrance examination. However, American students can take the exam more than once. The competitive pressures experienced by students in Western and Eastern education environments may also differ. Therefore, the gap between the competition and students' motivation under different circumstances needs to be analyzed in specific.

3. Individual Differences

3.1 Age group differences

To comprehensively understand how competitive elements are involved in the classroom in a generalized way, the section compared and analyzed students' learning motivation changes in a competitive study environment among different age groups and gender. In terms of age groups, young adults and children are the two main target subjects to be compared. David from Toronto University conducted a study about college students' motivation under competitive or mastery situations. A mastery situation referred to developing a new skill as the primary goal of learning. In contrast, a competitive situation emphasized having better performance than others in learning. The study divided 51 participants into two high GPA and low GPA groups and randomly assigned them to a mastery situation or competitive situation. Results significantly showed that self-reported interest in reading material is higher in both high learning ability and low learning ability groups under mastery situations than in competitive situations [6]. Benware and Deci also supported the finding that mastery groups showed higher intrinsic motivation than competitive groups [7]. Furthermore, the competitive learning on primary school students' motivation led to similar results to that of college students. A study by Chan and Lam on Grade 7 students in Hongkong found that students' self-efficacy decreased when they studied in a competitive setting compared to a non-competitive classroom. Since self-efficacy is the judgment of personal capacity to perform a specific and prospective task and affects an individual's level of motivation and actions, the decrease of self-efficacy under competitive scenarios represented the detrimental of competition to students' learning motivation [8]. Overall, there was no significant difference found between the two age groups in competitive study situation, which undermine students' motivation and learning enjoyment.

3.2 Gender differences

An exciting distinction was found between male and female attitudes and motivation toward competition during learning, in which females showed a more hostile attitude and less motivation when engaged in the competition. Ahlgren and Johnson found that primary school girls were more positive and active in the corporation learning activity, whereas boys were more likely to engage in competitive learning activities [9]. In addition, a recent study investigated by Pedro and his colleagues supported the finding that females had less motivation and perceived more negative emotion under ISCAR, which is the Information System for Competition based on problem-solving in Education [10]. The pheromone could be explained by the long existence of gender stereotypes and value differences that females are more willing to engage in activities that can bring social impact, so they have a negative view of competitive behavior. Also, characteristics of women is more tolerant, compromising, and moderate than men, which makes them seem less competitive in different settings such as schools, companies, and society. However, males are more likely to view competition as a challenge and a way to achieve self. In addition, gender stereotypes tend to portray men as more passionate, driven, and courageous. Thus, males tend to show higher motivation in competitive situations. The explanations could also be proven by the experiment conducted by Collins and other researchers indicated that young boys showed higher intrinsic motivation than girls in competitive situations, and such influence of competition is more significant when combined with gender segregation [11].

In general, the finding that there was no difference in competitive situations on ages and notable variance in gender suggested a consideration about education plan required that arise a comprehensive strategy allowed all students to be motivated so they could learn better and be more concentrated.

4. Cultrual Difference

Cultural difference between the eastern and western education system also needed to be a consideration in the generalization of how competitive situation influences the learning motivation of

students. As all know, Eastern and Western education are two distinctive systems. Typical eastern education such as China pays more attention to students' academic grades, and GAOKAO is the most important examination for Chinese students because it is the sole determination of whether a student can get into a top university, and it is also the opportunity for students from underdevelopment or poverty area of China to change their destiny. In contrast, the Western education system emphasizes students' all-round development. For example, universities in the United States will consider students' GPAs, extracurricular activities, and personal statements to decide whether admit a student. Apparently, students under the eastern cultural education system would feel stronger sense of competition with peers than others studied in the western cultural education system.

4.1 Eastern and Western Education System

The achievement motivation of students under the eastern cultural education system seems to be damaged by the long-term competitive environments. Lam and his colleagues' study indicated that Hongkong students in a competitive environment do better than those in a non-competitive environment with the easy task, but they had worse self-evaluation once they failed and were more hesitant to take challenges if the probability of becoming the winner was low. Also, even though the competition could improve students' motivation for easy tasks, the favorable effect suddenly disappeared on complex and hard tasks that required conceptual understanding [12]. However, students who studied in western cultural education environments were more likely to outperform and be more motivated under competition. For instance, Australian students presented higher achievement motivation in terms of competitiveness and a quest for excellence [13].

4.2 Collectivism and Individualism

One possible explanation for the cultural difference between competition and motivation could be collectivism and individualism. Eastern culture is always described as collectivism, which refers to people are care more about a group or social value than personal benefit. Individualism is the main characteristic of western culture that sees personal profit as the most crucial thing. Western people would count winning or competing as an important push on motivation since it could enhance personal fame or reputation, while eastern people view social approval as the main stimulus to be motivated. For example, China has the tradition of Confucian that considers society cohesion, persistence, and protection of "face," which are all collectivist factors to motivate people rather than individualism drive to have achievement motivation. The influence of individualism and collectivism could also be found in many social phenomena. In the workplace or school where collectivism is the mainstream, people are more inclined to take the collective honor, such as school ranking and company visibility, as the motivation; In an individualistic environment, people are mostly motivated by their own achievements or interests.

The characteristic of collectivism and individualism have been last and impacted eastern and western cultures for an extended period of time. Students who separately grew up and learned in eastern or western culture would be deeply influenced by the atmosphere and core of collectivism and individualism. Dean's study about the influence of collectivism and individualism on learning obstacles and self-efficacy of performance showed that the personal orientation of students on individualism or collectivism would affect their social cognition of self-efficacy and behaviors that are relevant with learning achievement [14]. Therefore, the strategy for motivating students learning needs to be carefully considered cultural differences.

5. Conclusion

In conclusion, the paper discussed the underline factor in competitive behavior and individual and cultural differences in motivation under a competitive context by reviewing previous studies.

Situational factors and individual factors such as the number of competitors, individual differences or similarities would affect people's tendency toward competitive behaviors, and confidence-level

and somatic anxiety as psychological factors affect people's attitude. In terms of individual differences, no significant age difference of primary school students and college students was concluded. However, there was a noticeable gender difference found that females were more negative and showed less motivation under competitive conditions. The gender differences may be explained by long-standing gender stereotypes, characteristics, or social expectations. Also, the cultural environment is a vital component that accounts for people's motivation in the competition. Western students view competition as a way to push and motivate themselves. Eastern students are more willing to see social acceptance as motivation. The cultural difference could be explained by the influences of individualism and collectivism.

One aspect that could be improved in this paper is to increase consideration of the possible impact of online and offline learning since the recent education setting has become more diverse. For example, the pandemic in recent years has made most students learning environment online. The changing education environment would also be a condition to affect students' learning. According to the practical research on online teaching effect evaluation based on data collection and analysis, students who participated in online teaching have better overall grades. There were no failed students in the online education group, while four failed students were in the offline education group, which meant that online teaching tools can provide more helpful data analysis [15]. Teachers can follow up on students' learning effects through data, timely update teaching resources, adjust teaching content and methods, and help individual backward students. Future research could study how different educational settings would affect students' motivation under competition, which may conclude a more comprehensive strategy to motivate students and improve their academic performance. In general, the learning motivation influenced by competition would also further affect the academic performance of students. The summary of the paper could help professionals and scholars in the psychology or education field to arise appropriate and effective teaching and learning strategies based on the students' age, gender, and educational environment, respectively, that could motivate students' learning.

However, previous studies on the association between competition and learning motivation are lacking. Most of the study mainly investigates students' state under time-limit or short-term competition such as sports or Olympic math competition, and subjects in the research do not have enough generalization, which tends to limit certain age groups or cultures. Therefore, studies about the relationship between long-lasting competitive phenomenon and motivation needs to be encouraged, and the range of subjects involved in the study should be expanded to increase generalization.

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