

Original Article

Differentiated Motivation According to Gender and Environment in Physical Education

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Abstract

The present study aims to identify the reasons for students' participation in physical education classes, whether these are personal or influenced by external factors. Additionally, the study sought to identify the barriers that hinder students from participating in physical education classes. The study involved developing, distributing, collecting, and interpreting the results of a questionnaire completed by 442 middle school students. The questionnaire was structured in a simple format with 12 statements divided into three sections (intrinsic motivation, extrinsic motivation, and amotivation), each section containing four statements in which students expressed their level of agreement using a three-point scale. The interpretations were made based on the students' gender and the environment they come from. The findings show that intrinsic motivation had the highest score, girls were more extrinsically motivated than boys, and the main barrier to engaging in motor activities was inadequate equipment, particularly in rural areas, but not exclusively.

1. Introduction

Motivation plays a crucial role in human behavior, being influenced by both internal and external factors that drive individuals to take action and achieve their goals. Motivation can stem from an internal desire to complete a task or be stimulated externally through rewards or punishments (Badubi, 2017). Gribanova (2020) defines motivation as the process of stimulating actions and encouraging individuals to complete tasks. It guides and directs behavior, ensuring the achievement of a clear goal.

Another important aspect of motivation is the long-term support of behaviors. It enables individuals to overcome obstacles and maintain their determination. A motivated person is more focused, energetic, and eager to improve their skills,

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which leads to better performance and the achievement of personal or professional goals (Ames, 1992; Goddard, 2017). Motivation also initiates, directs, and sustains the activities necessary to achieve a goal (Duda & Ntoumanis, 2005).

There are different types of motivation. Intrinsic motivation refers to the motivation that arises when a person engages in an activity for pleasure or personal interest, without seeking an external reward (Begum & Hamzah, 2017). In contrast, extrinsic motivation is driven by external factors such as rewards or social pressure (Deci & Ryan, 1985). For example, Maslow (1943) proposed a hierarchy of needs, in which the fulfillment of fundamental needs, such as physiological and safety needs, is necessary before a person can be motivated to pursue higher needs, such as self-actualization.

Additionally, Skinner (1953) emphasized that rewarded behaviors are more likely to be repeated, while punished behaviors are less likely to recur. Thus, motivation can be manipulated through the use of rewards and the avoidance of punishment.

Motivation is also essential in physical education and sports. Studies show that intrinsic motivation, fueled by the satisfaction of needs for autonomy, competence, and relatedness, leads to greater engagement and persistence in physical activities (Standage & Ryan, 2020). On the other hand, extrinsic motivation, based on external rewards, tends to be less effective in the long term. Positive feedback, which acknowledges effort and progress, stimulates intrinsic motivation, while negative or critical feedback can demotivate athletes (Goffena & Horn, 2021).

Another important aspect in physical education is that girls are often more motivated by the social and health aspects of sports, while boys are more drawn to competition and performance improvement (Vallerand, 2007).

At the school level, students' motivation to participate in physical education classes is influenced by personal interests, social influences, and the school environment. Personal interest in motor activities and the satisfaction gained from them are key factors in stimulating participation (Morgan, Milton & Longville, 2015). Teachers play a crucial role in this process, as they must identify students' interests and create opportunities to turn them into motivations for their progress.

Students are often influenced by their peers; for instance, if a group of friends actively participates in physical education classes, other students will be motivated to do the same (Rodrigues, Monteiro, Teixeira, & Cid, 2020). Confidence in one's abilities and the perception of their own athletic skills also influence students' motivation. Those who perceive themselves as athletically gifted tend to be more engaged, while students with negative experiences or who feel less capable may be demotivated. School facilities, such as proper sports equipment and suitable spaces, can also influence students' participation (Ntoumanis, 2001).

Students' motivation can be classified into three main categories: intrinsic motivation, extrinsic motivation, and amotivation. Teachers should focus on increasing intrinsic motivation, as it is associated with greater involvement, better performance, and long-term satisfaction (Ntoumanis & Standage, 2009).

2. Material and methods

The purpose of this research is to identify the reasons why students participate in physical education classes, whether they are personal (such as health, relaxation, or learning new skills - intrinsic motivation) or external factors (such as praise, social recognition, or the desire to compete on school teams - extrinsic motivation). Additionally, I aimed to identify the barriers that prevent students from participating in physical education classes, including negative perceptions of their physical ability, inadequate material conditions, or negative social experiences with peers (amotivation). The results of the study can be used to develop strategies and interventions aimed at improving students' engagement in physical activities.

In this regard, I designed a questionnaire to investigate the motives and barriers that influence students' participation in physical education classes. The questionnaire is structured in a simple format, in which students express their level of agreement with various statements using a three-point scale: "Strongly Disagree - 1 point", "Agree - 2 points", and "Strongly Agree - 3 points". The questionnaire is divided into two main sections:

- ✓ Motivation for participating in physical education class (intrinsic and extrinsic): This section contains 8 statements that explore the different reasons students participate in physical education classes;

- ✓ Reasons for not participating in physical education class (amotivation): This section includes 4 statements describing potential barriers to participation.

The questionnaire was distributed in physical form to middle school students from various schools in both urban and rural areas of Galați County. The questionnaires were anonymous, but certain data were collected regarding gender, grade, and background. After collecting the questionnaires, a total of 442 middle school respondents were gathered: 248 from urban areas (120 girls and 128 boys) and 194 from rural areas (98 girls and 96 boys).

The study was based on the following hypotheses: Hypothesis 1: Most students are motivated to participate in physical education classes due to the health and relaxation benefits; Hypothesis 2: Extrinsic motivation, such as praise from peers and teachers or the desire to be selected for the school team, plays a significant role in students' participation in physical education classes; Hypothesis 3: Poor material conditions and lack of appreciation from peers contribute to the amotivation of some students regarding participation in physical education classes.

These objectives and hypotheses will guide the research, providing a clear framework for collecting and interpreting the data obtained through the questionnaire. The results could offer valuable insights for educators and decision-makers in improving physical education programs to enhance students' motivation and participation.

3. Results and Discussions

After collecting all the questionnaires, the averages for each statement were calculated, as well as the averages for each type of motivation.

For the evaluation of intrinsic motivation, four statements were formulated, and the interpretation based on environment and gender is presented below.

For Statement 1, "I participate in physical education class to improve my health," the highest average was obtained by male students from rural areas, with a score of 2.80 points out of a maximum of 3 points. On the opposite end, the lowest average was obtained by female subjects from both urban and rural areas, with the same average of 2.58 points. In terms of environment, the difference between rural and urban areas is only 0.03 points.

Table 1. Summary table of responses from secondary school students by gender and environment

Nr. crt.	Gender	Social environment	Intrinsic motivation				Extrinsic motivation				Amotivation			
			1	2	3	4	5	6	7	8	9	10	11	12
1.	Mixed	Urban/rural	2,67	2,43	2,50	2,56	2,34	1,90	2,11	2,30	1,43	1,64	1,39	1,47
				2,54				2,16				1,48		
2.	Girls	Urban/rural	2,58	2,30	2,50	2,56	2,31	1,84	2,08	2,28	1,38	1,55	1,36	1,40
				2,48				2,13				1,42		
3.	Boys	Urban/rural	2,77	2,57	2,50	2,56	2,36	1,96	2,14	2,32	1,48	1,74	1,41	1,55
				2,60				2,20				1,55		
4.	Girls	Rural	2,58	2,32	2,50	2,58	2,31	1,80	2,20	2,37	1,36	1,58	1,33	1,54
				2,49				2,17				1,45		
5.	Boys	Rural	2,80	2,53	2,49	2,66	2,51	2,05	2,23	2,35	1,57	1,80	1,37	1,61
				2,62				2,28				1,59		
6.	Mixed	Rural	2,69	2,43	2,50	2,62	2,41	1,92	2,21	2,36	1,46	1,69	1,35	1,58
				2,56				2,23				1,52		
7.	Girls	Urban	2,58	2,28	2,50	2,55	2,32	1,87	1,99	2,22	1,39	1,53	1,38	1,28
				2,48				2,10				1,40		
8.	Boys	Urban	2,75	2,60	2,50	2,50	2,27	1,90	2,08	2,30	1,43	1,71	1,44	1,52
				2,59				2,14				1,52		
9.	Mixed	Urban	2,66	2,44	2,50	2,53	2,29	1,89	2,04	2,26	1,41	1,62	1,41	1,40
				2,53				2,12				1,46		

For Statement 2, "I participate in physical education class to relax," the top two spots are occupied by male students. The highest average of 2.60 points is obtained by students from urban areas. Boys from both urban and rural areas achieved an average of 2.57 points, higher than the girls' average of 2.30 points. Based on the environment, rural students are slightly more motivated than their urban counterparts.

For Statement 3, "I participate in physical education class to learn new games," there are no significant differences between groups, with all subjects, regardless of gender and environment, recording an average of 2.50 points, with the exception of boys from rural areas, who scored a very close 2.49 points.

For Statement 4, "I participate in physical education class to improve my motor skills," the highest average of 2.66 points is achieved by students from rural areas, while the least motivated are boys from urban areas. In terms of gender, both boys and girls recorded an average of 2.56 points, regardless of whether they are from rural or urban areas. There are differences between rural and urban subjects,

with rural students scoring an average of 2.62 points compared to 2.53 points for urban students.

For the evaluation of extrinsic motivation, four statements were also formulated, which are presented and interpreted below.

For Statement 5, "I participate in physical education class to make friends with my classmates," male students obtained the highest average of 2.51 points, indicating their desire to socialize. In terms of gender, boys scored an average of 2.36 points, very close to the girls' average of 2.31 points. Meanwhile, urban students scored an average of 2.29 points, lower than the rural students, who scored 2.41 points.

For Statement 6, "I participate in physical education class for the praise I receive from classmates/teachers," the scores ranged from 2.05 points for boys from rural areas to 1.80 points for girls from rural areas. Urban boys are less extrinsically motivated than their rural counterparts, scoring an average of 1.90 points compared to 2.05 points in rural areas. The situation is different for girls, where urban subjects scored an average of 1.87 points compared to 1.80 points in rural areas.

For Statement 7, "I participate in physical education class to be selected for the school team and participate in competitions," the averages ranged from 1.99 points (urban girls) to 2.23 points (rural boys). Based on environment, male subjects are more eager for recognition and more competitive, achieving an average of 2.14 points compared to the girls' average of 2.08 points. Among female students, rural girls scored significantly higher, with an average of 2.20 points, compared to urban girls, who scored 1.99 points.

For Statement 8, "I participate in physical education class because I am competitive and want to win," the averages ranged from 2.37 points for rural girls to 2.22 points for urban girls. Rural subjects are more eager for competition, with a score of 2.36 points compared to urban subjects, who scored an average of 2.26 points. In terms of gender, boys scored 2.32 points, just 0.04 points higher than girls, who scored an average of 2.28 points.

In the evaluation of amotivation, four statements were formulated and used, as detailed below. Overall, the scores are significantly lower compared to intrinsic or extrinsic motivation.

For Statement 9, "I do not participate in physical education class because I think I am not good at it; I only attend for attendance," the averages range from 1.36 points for girls from rural areas to 1.57 points for boys from rural areas. Analyzing by gender, girls are the least amotivated, with a score of 1.36 points compared to boys who have an average of 1.48 points. The analysis by environment shows that girls have nearly the same average, with 1.36 points in rural areas and 1.39 points in urban areas.

For Statement 10, "I do not participate in physical education class because the facilities are inadequate," the scores reflect material aspects that act as barriers to physical education. The averages range from 1.80 points for boys from rural areas to 1.53 points for girls from urban areas. Boys from rural areas particularly feel the lack of facilities. In terms of gender, boys have a score of 1.74 points while girls score 1.55 points.

For Statement 11, "I do not participate in physical education class because it is tiring and boring," the averages are the lowest, indicating that this statement is true, but to a minimal extent. Scores range from 1.33 points (rural girls) to 1.44 points (urban boys).

For Statement 12, "I do not participate in physical education class because my classmates do not appreciate me," the averages range from 1.61 points for boys from rural areas to 1.28 points for girls from urban areas. Analyzing by gender, boys are more amotivated, with a score of 1.55 points compared to girls who have a score of 1.40 points. There is a significant difference between rural girls (1.54 points) and urban girls (1.28 points). For boys, the difference is not as pronounced, with 1.61 points in rural areas and 1.52 points in urban areas.

As stated earlier, we also calculated the averages for each motivation category to determine the differences between the origins and genders of the subjects.

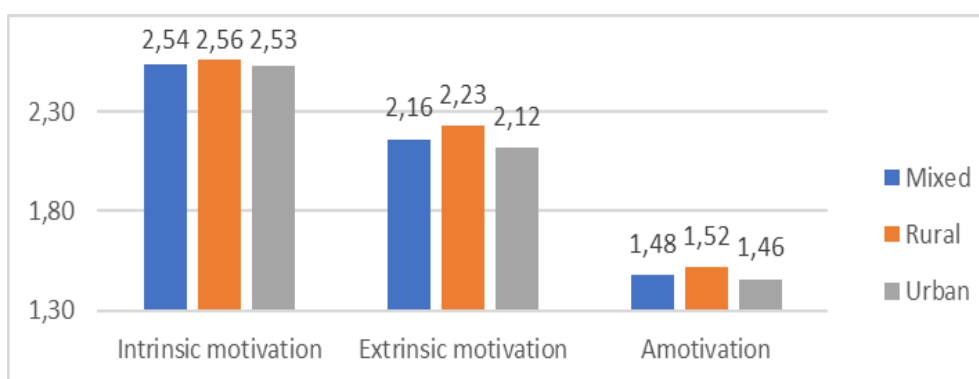


Figure 1. Graphical representation of students' motivation by environment

As shown in Figure 1, the highest level of motivation is intrinsic for all students in both environments. Additionally, students from rural areas have the highest score, which is 2.56 points. For both rural and urban subjects, the statement related to improving health receives the highest score (2.69 in rural areas and 2.66 in urban areas). In the case of extrinsic motivation, there is a noticeable difference favoring students from rural areas.

They achieve a score of 2.23 points compared to students from urban areas who score 2.12 points. For both environments, socialization and interaction with peers during physical education classes are very important, as indicated by the high score for statement 5. In terms of amotivation, both environments show very low scores compared to other forms of motivation. The lowest score for amotivation is found among students in urban areas.

When interpreting the results based on the gender of the subjects from both urban and rural environments, there are no major differences (Figure 2). Girls are less intrinsically motivated than male subjects. As previously noted, health remains the most frequently cited reason for participation in physical education activities for all subjects, regardless of gender. For extrinsic motivation, there are slight

differences between the two genders.

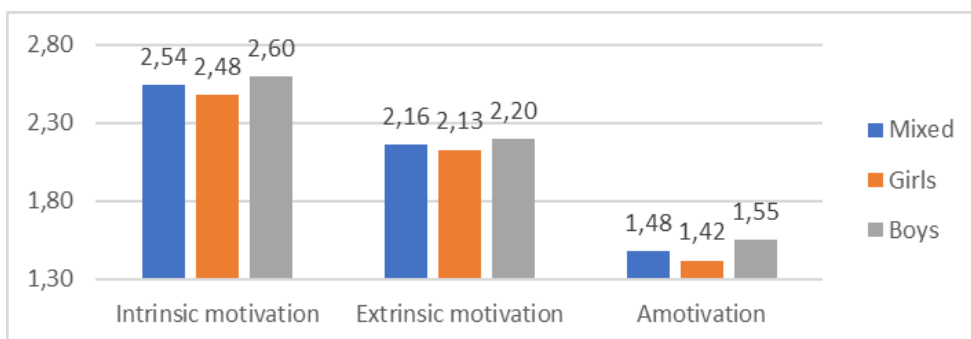


Figure 2. Graphical representation of students' motivation by gender

Male subjects are more extrinsically motivated, with a score of 2.20 points, compared to female subjects, who score 2.13 points. For both girls and boys, the highest average score is obtained for statement 5, which indicates interaction with peers. The lowest score in amotivation is found for statement 11, which relates to fatigue and boredom experienced during physical education classes.

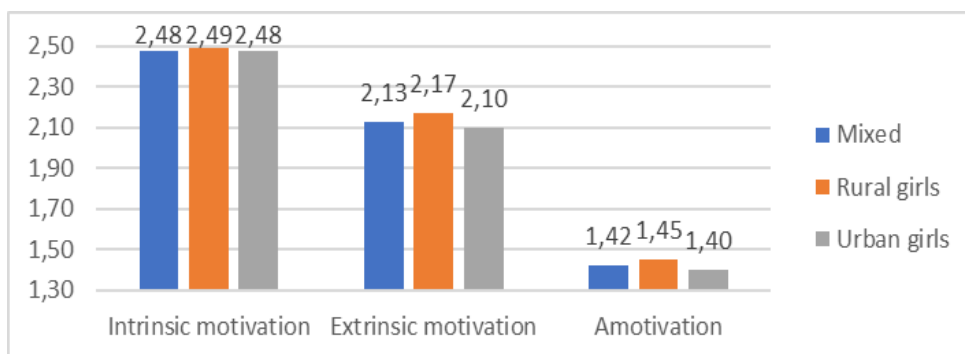


Figure 3. Graphical representation of girls students' motivation by environment

The interpretation of the results for female subjects based on environment (Fig. 3) shows larger differences only in extrinsic motivation. There are no major differences in intrinsic motivation between subjects from rural and urban environments. The statement about health continues to accumulate the highest score (2.58 points) for both categories of subjects. For rural subjects, statement 4, regarding the improvement of motor skills, also scores equally. In terms of extrinsic motivation, rural subjects are more motivated. Rural girls rate statement 8, which refers to competitiveness, with a score of 2.37 points, while urban girls rate statement 5, concerning socialization and interaction with peers during physical education classes, with a score of 2.32 points. For both categories of subjects, inadequate material resources are a demotivating factor for participating in classes.

Figure 4 shows the representation of the averages obtained by students for the

three types of motivation. Larger differences in student preferences appear only in extrinsic motivation. For intrinsic motivation, scores obtained by all subjects are around 2.60 points. In terms of extrinsic motivation, most rural subjects prefer statement 5, related to interaction with peers. For urban subjects, the highest score is for statement 8 (2.30 points), which concerns competitiveness among students.

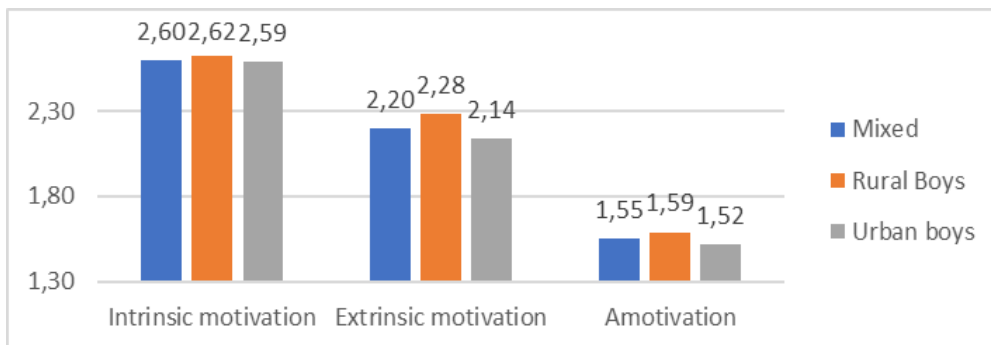


Figure 4. Graphical representation of boys students' motivation by environment

The most amotivated subjects are those from rural areas, with a score of 1.59 points. Both categories of subjects identify statement 10 as a barrier to engaging in physical activities. In the analysis by gender and environment (Fig. 5), the highest level of intrinsic motivation belongs to male subjects from the rural environment. All male subjects are more motivated than female subjects. For all subjects, regardless of gender and environment, aspects related to health promoted by physical activities achieve the highest score in this section. In terms of extrinsic motivation, the highest level is also achieved by male subjects from the rural environment, followed by female subjects from the same environment. Rural boys are extrinsically motivated by statement 5, related to socialization and interaction, while girls from the same environment are motivated by statement 8, related to competitiveness. In the urban environment, girls indicate statement 5 (interaction), while boys predominantly choose statement 8 (competitiveness).

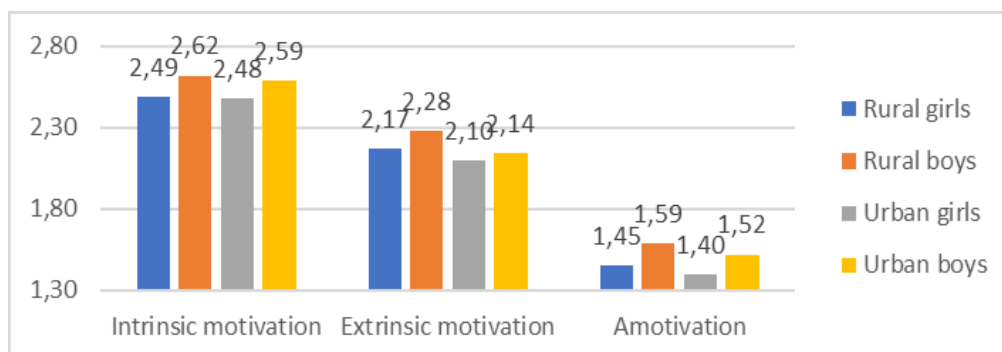


Figure 5. Graphical representation of students' motivation by gender and environment

The highest level of amotivation is observed among boys from rural areas, while the lowest level is found among girls from urban areas. All subjects, regardless of environment or gender, identify poor material resources (statement 10) as the primary barrier to engaging in physical activities.

Discussions

The results obtained from the questionnaire support the previously formulated hypotheses, highlighting a predominantly intrinsic motivation among students, regardless of gender or environment. This finding aligns with existing literature, which emphasizes that intrinsic motivation enhances active and long-term participation in physical activities (Standage & Ryan, 2020; Ntoumanis & Standage, 2009).

It is notable that boys—especially those from rural areas—exhibit higher levels of intrinsic motivation. This may be attributed to a stronger interest in physical skill development and the self-esteem associated with athletic performance (Ames, 1992; Goddard, 2017). Conversely, girls present slightly lower, yet stable, intrinsic motivation, particularly driven by health-related benefits and social interaction, as also suggested by Vallerand (2007).

Extrinsic motivation is also present, with significant differences between urban and rural environments. Students from rural areas appear to be more responsive to extrinsic stimuli such as teacher praise or participation in school competitions, supporting the hypothesis that social recognition plays a crucial motivational role (Deci & Ryan, 1985; Begum & Hamzah, 2017). For example, rural girls identified competitiveness as a key extrinsic motivator—an interesting finding that may signal evolving gender perceptions.

Amotivation levels are generally low, which is a positive indicator of student engagement in physical education classes. However, a closer analysis reveals that the main barriers are material in nature—including inadequate equipment, poor conditions, or negative self-perceptions. These findings are consistent with those of Ntoumanis (2001), who highlights the critical role of school facilities in maintaining student motivation.

A noteworthy gender-based difference is also evident in amotivation levels, with boys—especially in rural areas—reporting higher scores in this category. This may be partially explained by social pressures or a lack of inclusive opportunities that align with their interests. On the other hand, urban girls appear to be the least amotivated, suggesting a more positive attitude and better integration in physical education settings.

The study's findings suggest that physical education teachers should tailor their strategies based on students' gender and background. Creating a supportive environment, offering positive feedback, and involving all students in activities that match their interests are crucial actions. Furthermore, improving material conditions—especially in rural areas—is essential to reduce perceived barriers and promote active participation.

3. Conclusions

Male subjects have the highest scores in intrinsic motivation across all categories, suggesting that boys are more motivated to participate in physical education due to personal enjoyment and interest in the activity itself. Girls achieve slightly lower scores, indicating somewhat lower intrinsic motivation, but the difference is not very large. Scores in the rural environment are generally higher than those obtained in the urban environment, indicating a greater appreciation for physical activities in rural areas.

In terms of extrinsic motivation, boys achieve higher scores, suggesting they are more motivated by external rewards and recognition compared to girls. Girls are less likely to be motivated by external rewards. In the urban environment, scores are generally lower than in the rural environment, which may reflect a greater focus on other forms of reward or less interest in public recognition.

Analysis and interpretation of the statements related to amotivation indicate that girls have the lowest scores, showing a lower tendency to be amotivated compared to boys. In the rural environment, scores are slightly higher than in the urban environment, which may reflect more issues related to participation in physical activities or less favorable conditions in rural areas.

As a general trend, intrinsic motivation seems to be generally higher than extrinsic motivation. Amotivation is usually lower compared to other types of motivation but varies depending on gender and environment. Scores for intrinsic and extrinsic motivation differ significantly between genders, while amotivation varies more based on the environment.

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