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REALITY OF STUDENTS' ENGAGEMENT IN PHYSICAL EDUCATION

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ABSTRACT: *The purpose of this article is to build a scale allowing students to get reliable, scientific, and complete perceptions of their engagement in physical education (PE) classes. The study's findings were based on traditional sports science research methods such as document synthesis and analysis, expert interviews, and Cronbach's Alpha coefficient testing of the questionnaire's reliability. To measure student engagement in physical education, the authors developed a questionnaire with 19 items covering three aspects: intellectual engagement: 06 items, cognitive engagement: 06 items, and learning engagement (active learning): 7 items. The results indicated that students have a positive perception of PE's meaning and roles, but they are not totally involved in intelligence and active learning.*

KEYWORDS: Reality, engagement, physical education classes, students.

INTRODUCTION

It is no secret that physical activity is necessary to a student's overall well-being and the Vietnamese educational and training system. PE's goal is to improve people's health by increasing their physical ability, forming and perfecting key motor skills to work, study, and defend their homeland. PE also has significant aesthetic effects on people, which are not confined to the exercise process; the practitioner will accomplish a harmonious growth of the body, attractiveness, and emotiveness. The physical competition itself, as well as the thrill of success, give substantial rejuvenation, not just via the synergy of actions when executing tactical coordination. Therefore, practicing and competing in sports is appealing to both players and spectators, assisting those with aspirations to become stronger, more skilled, fearless, and capable of self-control and serve the collective's best interests. That explains why physical education is so popular among students.

The fact shows that PE has played an increasingly important role in comprehensive education for the young generation in recent years at universities, colleges, and professional settings. This subject has sparked a lot of interest among pupils. However, owing to its nature and different own sets of each school, it is not appropriate to apply it in a rigorous organizational format. The reality proves that students at many colleges across the country still regard PE as a difficult

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hurdle. This is owing to a variety of factors, one of which is subjective: we have yet to develop a system of scientific and practical methods to improve the subject's educational quality. More specially, learners' initiative and activeness have not been encouraged. Therefore, improving students' engagement in studying PE becomes more vital and required. In light of the above significance, I have chosen to study:

"Reality of students' engagement in physical education".

The study's objective is to build a scale that will give reliable, scientific, and complete information regarding students' activeness in PE classes. This is the foundation for proposing solutions to increase students' engagement in PE.

The methodology includes document analysis and synthesis, questionnaires, and statistical methods. Participants: managers, experts, PE lecturers, and first-year students at a public university in Ho Chi Minh City; involving:

- 986 (576 male, 410 female) students surveyed to assess the current situation
- 100 students surveyed to check the reliability of the scale
- 5 people are experts, managers, and PE experts at universities in Ho Chi Minh City

A five-point Likert scale (from 1 to 5) is employed for the survey.
The evaluation method is as follows: (5 – 1): 5 = 0.8.
The following are the average levels' scores: Never: 1.0-1.80; Rarely: 1.81-2.60; Sometimes: 2.61-3.40; Often: 3.41 – 4.20; Always: 4.21-5.0.

RESEARCH RESULTS

Building an engagement scale (ES) in PE lessons for students

The study was conducted to measure students' level of engagement towards PE lessons by the questionnaires based on the criteria relating to intellectual engagement, cognitive engagement, and learning engagement.In the field of research on Educational Psychology - Sociology (qualitative research), especially the level of engagement, it is quite sophisticated, necessitating a scale to be assessed methodically and assuring the reliability before use. The following are three steps on how the questionnaire scale was conducted to evaluate students' engagement levels in PE classes.

Step 1: Build a basic questionnaire form

A preliminary questionnaire was created in consultation with five experts, managers, and specialists. The goal of this stage was to get a few ideas for boosting the scale's reliability. Hence, the authors were honestly grateful for 06 suggestions of adjusting and supplementing the question items.

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Step 2: Modify the questionnaire sample and determine the response form

Receiving the recommendations from the experts, the writers adjusted several questionnaire items to suit the original one and started to collect data analyzed by SPSS 22.0 program. The questionnaire form was determined to include 19 items covering 3 main contents.

Determining the form of response: To efficiently survey 100 students, the 5-level Likert scale was applied to the response form. The student participants would express their perception by selecting a number from 1 to 5 that corresponded to the reality of their engagement during PE classes.

Step 3: Examine the reliability of the questionnaire using Cronbach's Alpha index

The author decided to use Cronbach's Alpha index to measure accurately the questionnaire's reliability. For students, a scale to gauge the reality of their engagement in PE sessions includes 3 contents with 19 items.

Scale to assess students' engagement in PE classes

Table 1 shows the results of utilizing Cronbach's Alpha index to evaluate the scale of measuring engagement levels of students in PE courses.

Table 1. Description of Cronbach's Alpha index of the questionnaire scale to measure students' engagement in PE classes

	Questionnaire Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Intellectual Engagement	You tend to volunteer to answer teachers' questions, bring new ideas, and enjoy discussions and debates.	15.03	3.332	.487	.739
	You tend to observe, memorize and accurately repeat movements.	15.15	3.019	.476	.728
	You tend to think, ask questions and demand detailed explanations of unknown issues (exercises, movements).	15.60	2.404	.636	.672
	You tend to think associatively, compare difficulties of movements.	15.25	2.543	.637	.665
	You tend to actively and flexibly apply existing knowledge and motor skills to new movement exercises.	15.58	2.249	.648	.656
	You regularly find more information about new techniques and movements to supplement your knowledge.	15.31	2.619	.433	.677
	Cronbach's Alpha = .716			**N of Items = 6**	
Cognitive Engagement	PE is the best means to boost health.	16.21	3.454	.495	.659
	PE helps students improve their own motor skills.	16.58	4.272	.353	.724
	PE helps students form the healthy habit of regular exercise and playing sports.	16.35	3.650	.371	.679

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	PE directs students to a healthy lifestyle, away from social vices	16.38	3.065	.675	.566
	PE is a means for students to practice their will, discipline, perseverance, and patience.	16.13	3.217	.374	.696
	PE is a means to communicate with the community and society.	16.42	3.621	.486	.644
	Cronbach's Alpha = .732			**N of Items = 6**	
Academic Engagement	You actively prepare the yard and training equipment.	19.32	2.934	.376	.527
	You tend to concentrate and actively listen to lectures during class time.	19.44	2.734	.576	.455
	You tend to enthusiastically participate in all learning activities (expressing opinions, taking notes, participating in group games, etc.)	19.52	1.745	.547	.394
	You are determined to overcome difficulties and complete all assigned tasks.	19.42	2.837	.463	.486
	You tend to be self-discipline, actively practice more after school hours	19.15	4.054	.368	.752
	You attend PE classes fully and on time.	19.27	2.710	.413	.488
	You tend to strictly comply with regulations in the examination.	19.37	2.903	.341	.517
	Cronbach's Alpha = .758			**N of Items = 7**	

Table 1 shows the results of the Cronbach's Alpha test of the questionnaire items. With the overall Cronbach's Alpha value = 0.716 – 0.758 > 0.6, it indicates that all items have a correlation coefficient with the whole variable (Corrected Item-Total Correlation) and exceed the acceptable threshold (>0.3). Thus, it is possible to note that the author has created a scale reliable enough to measure students' engagement in PE sessions.

The 19 questionnaire items were chosen after going through the processes of building a basic questionnaire sample, adjusting the scale questionnaire form, determining the answer form, and testing the questionnaire's reliability by Cronbach's Alpha index. They are:

Intellectual engagement (6 items).

Volunteer to answer teachers' questions, bring new ideas, and enjoy discussions and debates.
Observe, memorize, and accurately repeat movements.
Think, ask questions and demand detailed explanations of unknown issues (exercises, movements).
Think associatively, compare difficulties of movements.
Actively and flexibly apply existing knowledge and motor skills to new movement exercises.
Regularly find more information about new techniques and movements to supplement your knowledge.

Cognitive engagement (6 items)

PE is the best means to boost health.
PE helps students improve their own motor skills.
PE helps students form the healthy habit of regular exercise and playing sports.

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PE directs students to a healthy lifestyle, away from social vices
PE is a means for students to practice their will, discipline, perseverance, and patience.
PE is a means to communicate with the community and society.

Learning engagement (7 items)
Actively prepare the yard and training equipment.
Concentrate and actively listen to lectures during class time.
Enthusiastically participate in all learning activities (expressing opinions, taking notes, participating in group games, etc.)
Determined to overcome difficulties and complete all assigned tasks.
Be self-discipline, actively practice more after school hours
Attend PE classes fully and on time.
Strictly comply with regulations in the examination.

The reality of students' engagement in physical education
A survey of 986 students (576 males, 410 males) was conducted to measure students' engagement in PE. The response was based on 5 levels numbered (1) Never, (2) Rarely, (3) Sometimes, (4) Often, (5) Always. The results in Table 2 were shown by an independent sample T-Test, illustrating the different responses by gender.

Table 2. Comparison of survey results of students' engagement in PE lessons by gender

	Questionnaire items	Male (n = 576)		Female (n = 410)		Comparison	
		Mean	Std.	Mean	Std.	t	Sig
	Intellectual engagement	3.30		3.28			
1	You tend to volunteer to answer teachers' questions, bring new ideas, and enjoy discussions and debates.	3.18	.500	3.14	.511	0.12	0.86
2	You tend to observe, memorize and accurately repeat movements.	4.00	.403	4.13	.423	1.15	0.09
3	You tend to think, ask questions and demand detailed explanations of unknown issues (exercises, movements).	3.17	.506	3.07	.450	0.76	0.08
4	You tend to think associatively, compare difficulties of movements.	3.14	.506	3.11	.600	0.09	0.89
5	You tend to actively and flexibly apply existing knowledge and motor skills to new movement exercises.	3.12	.542	3.13	.473	0.02	0.98
6	You regularly find more information about new techniques and movements to supplement your knowledge.	3.19	.565	3.08	.473	0.41	0.68
	Cognitive engagement	3.86		3.82			
1	PE is the best means to boost health.	4.42	.552	4.31	.464	1.20	0.23
2	PE helps students improve their own motor skills.	3.69	.565	3.70	.459	0.06	0.95
3	PE helps students form the healthy habit of regular exercise and playing sports.	3.74	.542	3.80	.459	0.62	0.53
4	PE directs students to a healthy lifestyle, away from social vices	3.63	.489	3.59	.600	0.37	0.71

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5	PE is a means for students to practice their will, discipline, perseverance, and patience.	3.58	.500	3.52	.606	0.50	0.62
6	PE is a means to communicate with the community and society.	4.07	.541	4.01	.464	0.65	0.52
	Academic engagement	3.18		3.17			
1	You actively prepare the yard and training equipment.	2.93	.529	2.94	.500	0.03	0.94
2	You tend to concentrate and actively listen to lectures during class time.	3.00	.403	3.18	.487	1.17	0.09
3	You tend to enthusiastically participate in all learning activities (expressing opinions, taking notes, participating in group games, etc.)	3.28	.500	3.17	.450	1.22	0.08
4	You are determined to overcome difficulties and complete all assigned tasks.	3.18	.500	3.11	.600	0.97	0.11
5	You tend to be self-discipline, actively practice more after school hours	3.18	.471	3.15	.450	0.11	0.55
6	You attend PE classes fully and on time.	3.37	.589	3.33	.473	0.39	0.70
7	You tend to strictly comply with regulations in the examination.	3.34	.582	3.32	.468	0.24	0.81

The response difference between the two genders which is valued by Cronbach's Alpha in Table 1 is Sig > 0.05, indicating that the gender difference did not statistically matter, according to the data in Table 2. As a result, we can conclude that the gender difference does have very little effect on the results of measuring students' levels of engagement in PE classes.

In terms of intellectual engagement: students noted it as the Sometimes level (male = 3.30, female = 3.28); most of the questionnaire items were rated Sometimes (2.61 – 3.40); except for the item relating to observing, memorizing, and accurately repeating movements, students rated it Often (3.41 – 4.20). The responses of gendered students' intellectual engagement in PE courses are synthesized and compared in Figure 1 below.

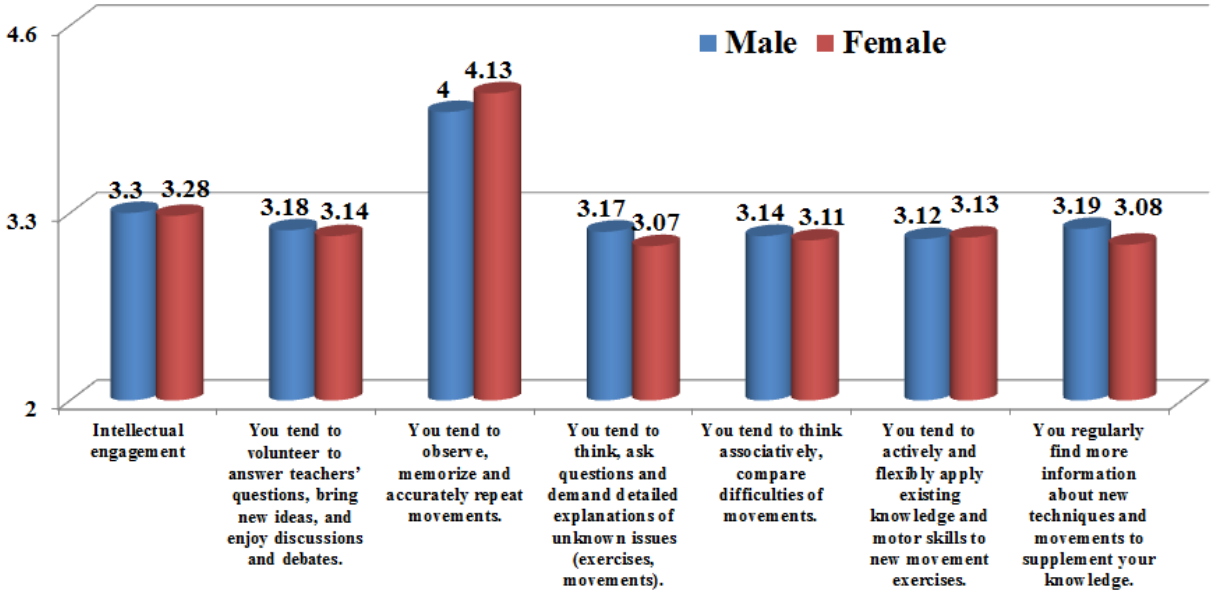

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Figure 1. Results of students' intellectual engagement in PE classes by gender

In terms of cognitive engagement: students noted it as the Often level (male = 3.86, female = 3.82); most of the questionnaire items were rated Often (3.41 – 4.20); except for the item regarding PE is the best means to boost health, students rated it Always (4.20 – 5.00). The survey findings of gendered students' cognitive engagement in PE classes are compared in Figure 2.

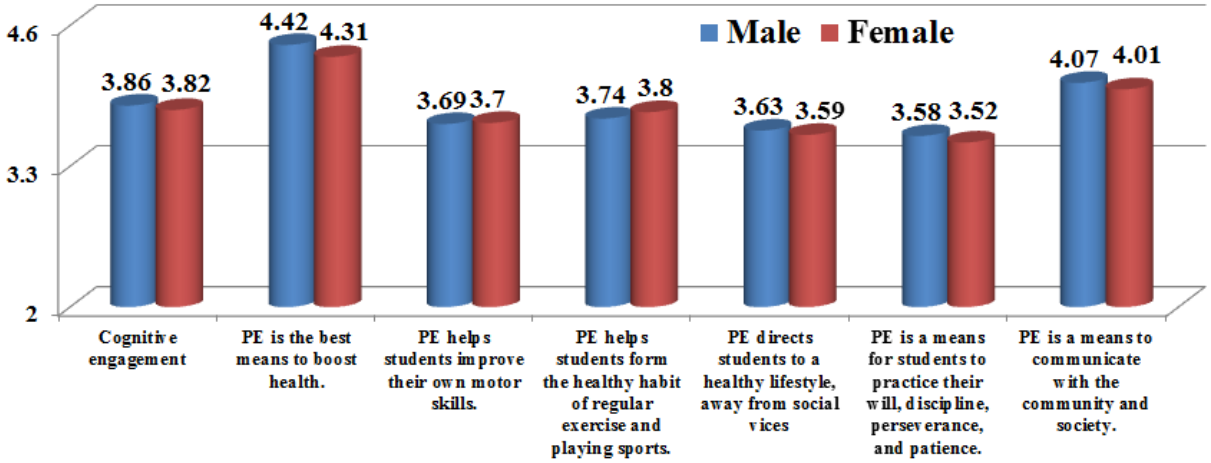

Figure 2. Results of students' cognitive engagement in PE classes by gender

In terms of learning engagement: students noted it as the Sometimes level (male = 3.18, female = 3.17); most of the questionnaire items were rated Sometimes (2.61 – 3.40); while the item regarding students' full attendance and punctuality got the highest value (male = 3.37, female = 3.33), the item regarding their careful preparation for PE classes was the least valued (male = 2.93, female = 2.94). The survey results of gendered students' learning engagement in PE sessions are compared in Figure 3.

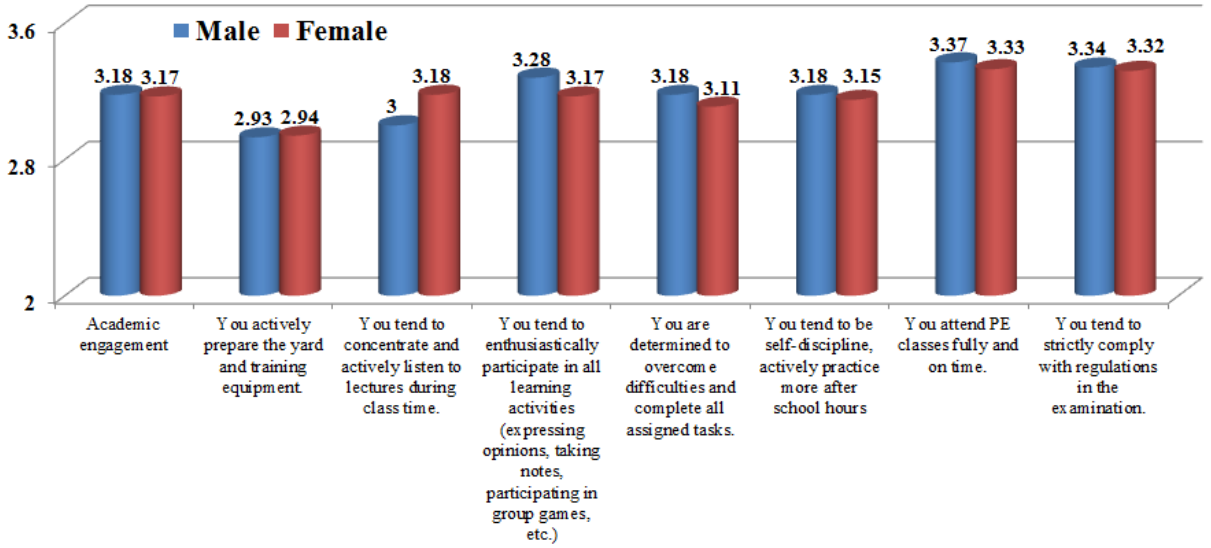

Figure 3. Results of students' learning engagement in PE classes by gender

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Figure 4 depicts a comparison of students' intellectual engagement, cognitive engagement, and learning engagement in PE class by gender.

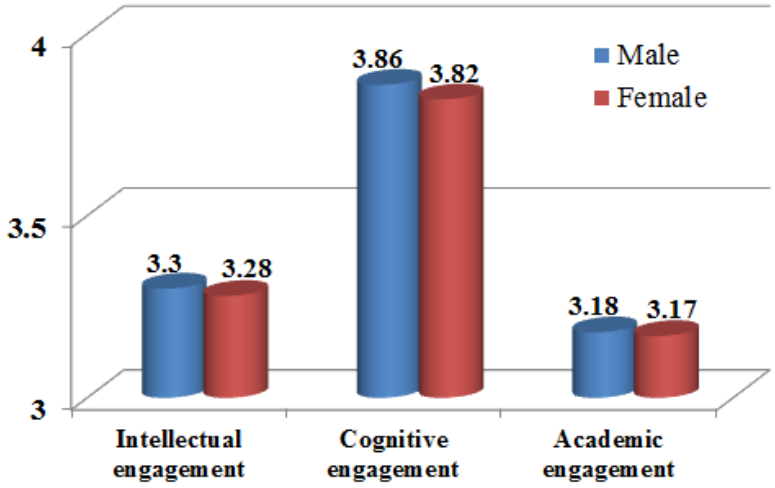

Figure 4. Comparison of students' intellectual engagement, cognitive engagement, and learning engagement in PE class by gender.

As seen in Figure 4, it is noted that students have a good cognitive understanding of the importance of physical education, but they are not very engaged in intelligence or active learning. This is also a subject for a new study direction: why are kids informed but not engaged in PE class?

CONCLUSION

In summary, by synthesizing and analyzing documents, consulting experts, and checking the reliability of the questionnaire with Cronbach's Alpha coefficient, the authors have identified a valid questionnaire with 19 items (intellectual engagement: 06 items, cognitive engagement: 06 items, and academic engagement: 07 items) that measure students' levels of engagement in PE lessons. The results indicate students' perceptions of PE's importance in general education are good, but their perceptions of intelligence and active learning are rather modest.

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