

การสำรวจปัจจัยด้านหลักสูตรและเพศที่ส่งผลต่อการเรียนรู้และอัตมโนทัศน์
ของนักเรียนระดับมัธยมศึกษาตอนปลาย
A Survey on Factors of Curriculum and Gender Differences in Learning
Performance and Self-Concept of High School Students

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งานวิจัยนี้มีวัตถุประสงค์เพื่อสำรวจผลกระทบจากปัจจัยสิ่งแวดล้อมทางสังคมที่มีต่อนักเรียนในด้านการเรียนรู้และอัตมโนทัศน์ ทำการวิจัยโดยการสำรวจ เก็บข้อมูลปฐมภูมิจากกลุ่มตัวอย่างนักเรียนชั้นมัธยมศึกษาตอนปลาย ห้องเรียนโครงการพิเศษและห้องเรียนทั่วไปของโรงเรียนมัธยมศึกษาแห่งหนึ่งในจังหวัดสุราษฎร์ธานีจำนวน 100 คน คำนวณกลุ่มตัวอย่างด้วยสูตรของ Taro Yamane ผู้วิจัยตั้งสมมุติฐานว่านักเรียนในโครงการพิเศษจะได้รับผลกระทบจากสิ่งแวดล้อมทางสังคมมากกว่า เนื่องจากเรียนในหลักสูตรที่ยากกว่า อีกทั้งโรงเรียนและครอบครัว ตั้งความหวังกับตัวนักเรียนไว้ค่อนข้างสูง ผู้วิจัยเก็บตัวอย่างโดยใช้แบบสอบถามที่พัฒนาจากแนวคิดสิ่งแวดล้อมทางสังคมของ Pekrun and Stephens (2015) การประเมินคุณภาพของแบบสอบถามใช้วิธี Chronbach's Alpha Coefficient วิเคราะห์ข้อมูลด้วยวิธีการทางสถิติพื้นฐานและสถิติที่อ้างอิง Wilcoxon Two-sample Test ผลการวิจัยพบว่า ความแตกต่างอย่างมีนัยยะสำคัญไม่ได้อยู่ที่นักเรียนในหลักสูตรที่ต่างกันแต่อยู่ที่เพศของนักเรียน โดยที่นักเรียนหญิงได้รับผลกระทบจากสิ่งแวดล้อมทางสังคมมากกว่านักเรียนชายอย่างมีนัยยะสำคัญทั้งด้านการเรียนรู้และอัตมโนทัศน์ ผลการศึกษานำไปสู่ข้อแนะนำว่าผู้บริหารของโรงเรียนควรพิจารณาความสำคัญของสิ่งแวดล้อมทางสังคมที่มีผลต่อนักเรียน โรงเรียนควรมีนโยบายและแผนการทำงานที่สามารถช่วยแก้ไขปัญหาให้กับนักเรียนในโรงเรียน

คำสำคัญ: นักเรียนไทย, ผลสัมฤทธิ์ทางการเรียน, สิ่งแวดล้อมทางสังคม, อัตมโนทัศน์

Abstract

The purpose of this research was to survey the effects of social environment factors on students' learning performance and self-concept. This survey research collected data from 100 high school students from two different programs: gifted and ordinary classes of a secondary school in Suratthani Province. Sampling size was calculated by Taro Yamane's formula. It was hypothesized that students from gifted programs would be more affected from social environments due to more challenging curriculum and higher expectations they received from school and families. Data were collected, using online questionnaire adapted from Pekrun and Stephens's (2015) concept of social environment in educational aspects. Reliability of the questionnaire was tested by Chronbach's alpha coefficient method. The data were statistically analyzed, using Wilcoxon Two-sample Test. There was no significant difference between the program curriculums: gifted and ordinary classes. However, it was found that there was significance on student genders. The results revealed that female students were affected more significantly by their social environment than their male counterparts, both in learning performance and in self-concept. Consequently, it is recommended that school administrators pay attention to how social environments affect students, and policies and plans be implemented to assist them in this matter.

Keywords: Learning Performance, Self-concept, Social Environment, Thai Students

Introduction

A great number of high school students in Thailand struggle with their studies aimed at continuing to tertiary education. Undoubtedly, the competitive education has psychological effects on students. To provide an education best suited to learners' interests and for their best academic success, most high schools in the country create different programs for students. Commonly, there are gifted classes for students who can perform well in mathematics and sciences whereas others are in ordinary classes. Although there are several advantages of this division system (e.g. students can be better developed in the fields in which they have potential), it results in students being socially classified as either gifted or ordinary classes.

To succeed in education, social environment factors: Described by Barnett, & Casper, (2001) as the set of ideas, systems, relationships and beliefs that affect people within that society; are crucial not only for those in the gifted classes but also those in ordinary classes. Thus, the social environments affect students' self-esteem, emotions, behaviors, and attitudes toward learning performances and processes that will affect their academic performance. Previous studies in the field of psychology, such as Haertel, Walberge, and Weinstein (1983) and Walberg (1980), proved that social environments greatly impact learners' performance. Since social environments have been proven important to learning performance, they have received attention from educators around the world. Nevertheless, research on social environment factors in Thai education is rare. The researchers hope to fill this gap by surveying the social environment factors that affect high school students in the Thai context.

Choosing participants from a typical public school in southern Thailand, the researchers hope that the findings will be able to identify the effects of social environments that students receive in general. It was hypothesized that students in the gifted class tend to receive higher impact from their social environment because their curriculum was more challenging when compared to that of their counterparts, and they got high expectations from their teachers and parents to be academically successful.

Objectives

With a hope to contribute to Thailand's education system, this study aims to survey the social environment factors that affect high school students and to compare how the social environment affects learning performance differently between students in different groups.

Literature Reviews

A good number of research studies in the field of psychology in education showed the relationships between social environment and learners in several aspects. For example, Boyce, Bazargan, Caldwell, Zimmerman, and Assari (2020) conducted research on the effect of parental education on high school students. Data was collected from over a thousand American students in 10th grade using a questionnaire. It was found that high parental education was associated with lower school risks and better school environments. Sun, Hendrickx, Goetz, Wubbels, and

Mainhard (2020) analyzed how classroom environment affects students' achievement. Their participants were approximately 2,000 students aged between 11-17 years old in China. Results showed that the classroom environment is associated more with students' emotions than their achievement. Further, Tornare, Czajkowski, and Pons (2015) analyzed students' emotions after solving math tasks to see how emotions contributed to self-esteem, metacognitive experience and performance.

Previous research applied several research methods to study how social environments affected learners in different aspects such as self-esteem and achievement. One significant concept in the area was the social environments that affects learners' self-esteem proposed by Pekrun and Stephens (2015). The present study adapted Pekrun and Stephens (2015)'s concept as a framework of this study.

According to Pekrun and Stephens (2015), social environments affect students' self-concepts. They associate with how students realize their own personal worth, opportunity to develop, demonstrating knowledge, achieving feedback and getting along with peers. The social environments often contain the information that relates to one's self-development; they can influence the student's perspective of self-concept. Further Pekrun and Stephens (2015) explained that self-concept is influenced by four social environments: attributions, learning environment, achievement feedback, and the composition of the student group.

The Attributions

The attributions refer to the relationships between the individual and surrounding people such as teachers, parents and peers. The attribution can severely influence the student's self-concepts through the verbal, mental, or physical actions between the student and those around them. For example, if teachers teach them the hard way, focusing on their mistakes (scolding, sarcastically pointing out their mistakes) "You got low score because you were so lazy", it would directly impact students to negatively blame themselves. In contrast, if students receive support from the teachers, parents or peers, such as praise for their performance, encouragement to overcome their mistakes or expression of a positive attitude towards their mistakes, it could help the student to develop a better perspective, performance, and most importantly, self-esteem.

Learning Environment

A positive learning environment can help students learn and develop positive self-concepts such as autonomy; friendly and supportive environments can help students develop critical self-regulation skills, allowing them to successfully lead and regulate their own learning. Consistent behavioral rules can improve the cognitive predictability of students' situations, which can improve their overall sense of competence. Pekrun and Stephens (2015) explanation of learning environment corresponds to Walberg's (1980) model of education productivity which consisted of three main variables that have impacts on learning productivity, namely: Aptitude, Instruction and Environment. According to Walberg (1980) the environment variable refers to environments that contribute to students' learning performance such as home, classroom and friends.

Achievement Feedbacks

Achievement feedback is another part that played an important role in one's self-concept. The contents of feedback and achievement feedback is crucial for the impact that will be applied to students. Pekrun and Stephens (2015) categorized achievement feedbacks into four types. Firstly, the normative standard refers to the comparison between a student and his/her peers. If the student did better than peers, his/her achievement is considered high, and the student's achievement was low if he/she did worse than peers. Secondly, the intra-individual standard refers to the development of an individual over time. Thirdly, the task-referenced standard refers to the achievement of defined tasks. Lastly, the cooperative standard refers to the performance of the group.

The Composition of Student Groups

The composition of student groups had effects on student's achievement and self-concepts of ability. According to Pekrun and Stephens (2015), being in a high-ability classroom reduces one's chances of succeeding in comparison to others whereas being in a low-ability classroom increases one's chances of succeeding. This observation was able to clarify how the ability levels of student group can impact self-concepts.

Pekrun and Stephens (2015) self-concept has been proven useful; however, there are contrasting views called the "Big-Fish-Little-Pond" effect by Marsh (1987), who argued that self-concept depends on how one compares oneself with peers. He stated "When comparing one's self-concepts to students in high-ability classes, one's self-concepts may be reduced, while when comparing one's self-concepts to students in low-ability classes, one's self-concepts may be increased." (Marsh, 1987).

Turning our attention to previous studies focused on differences on genders and curriculums that affected student achievements, interesting works are reviewed as follows.

In term of genders, Dania (2014) investigated the effect of gender on student achievement in Nigeria. The participants comprised of 180 students from six secondary schools. The main purpose was to understand how genders affected student achievement in a social science subject. The results showed no significant difference in academic achievement between genders. The researcher concluded that the teaching method was a more important factor than gender, and all students should be treated equally. On the other hand, Lui and Wang (2005) pointed out that gender differences could be observed between students in terms of academic self-concept. Their study was conducted in Singapore with 656 secondary students: 48.5% were male and 51.5% were female. The participants' academic self-concept was measured on a rating scale questionnaire. The results showed no significant difference on the academic self-concept scale, but it was found that female students expressed higher efforts in academic work than male students whereas male students perceived higher confidence in their academic work.

Further, studies have been conducted to compare the achievements of students in different curricula, both at program and course levels. Summers, Waigandt, and Whittaker (2005) compared

student achievement and satisfaction between an online curriculum and a traditional classroom curriculum. The participants were 38 undergraduate students in a nursing school in the United States of America. The participants enrolled in an Information Technology course and they were allowed to choose the study either online or in class. Both course curricula offered the same content, taught by the same professor and using the same assessment methods. The results showed no statistically significant differences between students in the two curricula. However, students in class showed higher satisfaction the course than those studying online. Another work on how program curricula affected student achievement was a study by Hallinan and Kubitschek (1999). The researchers compared achievement of students of different curricula by examining the instruction method, interpersonal approach and institutional process. This study was large scale, conducted with 11,000 students in seven secondary schools. Hallinan and Kubitschek (1999) used the results of mathematics and English standardized tests and results from a questionnaire as the key variables. The results indicated that assignments to students in higher curricula namely Honors and Advanced groups, were proven to yield positive effects on student achievement. In contrast, assignments in lower curricula, namely '*regular*' and '*basic*' groups decelerated student achievement.

Nevertheless, the study of social environments in education has contributed greatly to understanding of how social environments affect one's academic performance and self-concept, particularly in the context of the psychology of education. For example, Shao, Pekrun, and Nicholson (2019) extended the study of learning psychology to integrate with second language learning. In that study, social environments played one of the most important roles in students' learning performances. Reasonably, Pekrun and Stephens' (2015) concepts of social environment was adopted and adapted in for analyzing data of this study.

Methodology

The study has been designed as a quantitative survey research.

Population and Sample Size

The population of this research was a sample of Thai students from a secondary school located in Suratthani province in southern Thailand. They were in Mathayom 5, aged between 16-18 years old. The total number of target participants was 116 in four classrooms: two gifted classes and two ordinary ones. The sample size was calculated using Yamane (1967) formula as shown below.

$$n = \frac{N}{1 + Ne^2}$$

N refers to the population size, e refers to degree of error expected, and n refers to the sample size. The calculation can be presented in Table 1.

Table 1 Sampling by Taro Yamane's (1967) formula

Classrooms	Population	Sample Size
Ordinary	65	55
Gifted	51	45
Total	116	100

Noted that using Taro Yamane's formula, the sample size calculation was 100 as showed in Table 1. However, the researchers collected 12% extra (10 responses) in case of incomplete responses. Therefore, the total sample size of the study was 100 students from two gifted classes and two ordinary classes. (Yamane, 1967)

Instrumental Design

An online Google Forms questionnaire was created using knowledge from literature reviews of previous studies which were fundamental aspects of this research design. There were steps that were taken during the design of the questionnaire as follow.

First, the researchers created questions under guidance by an expert in psychology. All questions were written in English and Thai to ensure participants' understanding.

The validity and reliability of the questionnaire was checked. All questions were checked by an expert in psychology to ensure that they would yield valid answer to the research questions. The reliability of the questionnaire was tested using Cronbach's alpha coefficient to measure the internal consistency of items Nuangchalerm (2013). The tests showed that the questionnaire had a relatively high reliability (Cronbach's alpha coefficient 0.89)

Finally, the questionnaire was checked by and piloted with ten students. It was revised according to the feedback from the pilot study. Finally, it was constructed online using a Google Form.

Ethical Consideration

Completion of the questionnaire was totally voluntary, and before the participants started the questionnaire the researchers informed them clearly that all personal data would remain private and confidential and results would be anonymous. It will be used only as a way to categorize the data and will not be shown to the public without their permission. Finally, the researcher explained to the participants that all questionnaires will be processed and stored securely.

Data Collection

There were four steps of data collection. Firstly, the researchers contacted one of the teachers who was responsible for teaching the target classes and asked her to assist with the distribution of questionnaire. Secondly, the researchers distributed the questionnaire by providing a QR code through a LINE group of the four classrooms with the help of the distributor. Thirdly, the participants accessed and answered the questionnaire. Lastly, the researchers downloaded the results from the questionnaire to an Excel file for the analysis.

Data Analysis

Once data has been collected with the participation rate at 100%, it was quantitatively analyzed. The relationship between variables was analyzed using mean and standard deviation. The Wilcoxon Two-Sample Test was used to test the differences in the mean scores where all statistical significance was defined at the probability value (p-value) of .05 (Nuangchalem, 2013). The questionnaire results were tabulated according to Likert scale as presented in Table 2.

Table 2 Likert scale of rating

Score Rank	Degree of Agree
4.50-5.00	Very high
3.50-4.49	High
2.50-3.49	Neutral
1.50-2.49	Low
1.00-1.49	Very low

Result

Demographic Data

The first part of the questionnaire asked the general information of the participants. The total number of participants is 100; it included 51 of gifted and 49 of ordinary classes. 71.4% of the participants were female students whereas 28.5% were male students. All of them were aged between 16-18 years.

Comparison between the Two Programs

The second part of the questionnaire focused on experiences of social environments that affected participants' learning performance and self-concept. The results of the survey were presented in Table 3.

Table 3 Experience of social environment effects on learning performance by programs

Questions	Mean (S.D.)		p-value
	Gifted (n=51)	Ordinary (n=49)	
A1. My classroom is very serious and stressful.	3.31 (0.71)	3.24 (0.80)	.65
A2. There are overwhelming assignments from my classrooms every week.	4.17 (0.74)	3.89 (0.87)	.09
A3. My peers treat me badly (Bullying, shaming, false and insulting gossip).	2.02 (0.61)	2.32 (0.85)	.04
A4. I do not have peers as friends.	1.96 (0.48)	2.16 (0.68)	.09
A5. My teachers are supportive.	3.76 (0.90)	3.91 (1.03)	.43
A6. I got humiliated by my teachers when I made mistakes in class.	2.35 (0.82)	2.43 (0.91)	.66
A7. I got scolded by my teachers when I did not understand the contents.	2.56 (0.83)	2.63 (0.91)	.71
A8. My parents express disappointment when I get bad school reports.	2.39 (0.83)	2.73 (1.03)	.07
A9. I was allowed by my parents to choose my current study program.	4.43 (0.90)	4.31 (0.93)	.50
A10. My parents expect me to achieve at least a bachelor's degree.	3.98 (1.19)	4.16 (1.02)	.41
A11. I received compliments/rewards from my parents when I do well at school.	4.05 (0.92)	3.96 (1.15)	.63
A12. I can do whatever I like in my free time.	4.25 (0.79)	4.20 (1.06)	.79
Overall	3.27 (0.28)	3.33 (0.39)	.40

Table 3 presented the results of the survey on the participants' experience of social environments that affected their learning performance. It can be seen that students in gifted classes rated question A2: 'overwhelming assignments' and question A12: 'I can do whatever I like in my free time' the highest at 4.2 whereas question A9: 'allowing to choose study program' received the highest mean score from participants in ordinary classes at 4.3. The total mean scores showed no significant difference between the two programs. Nevertheless, the mean scores of questions A3: 'My peers treated me badly' was statistically significant different between the two programs. As can be seen, the mean score of ordinary classes was significantly higher than that of gifted classes (ordinary classes = 2.3, gifted classes = 2.0, p-value = 0.04). This indicated that students in ordinary classes experienced negative treatments such as bullying, shaming, false and insulting gossips from friends more than students in gifted classes.

The next part of questionnaire focused on the effects of social environment on one's self-concepts. Table 4 presents results of the survey on this part.

Table 4 The effects of social environment on one's self-concepts by programs

Questions	Mean (S.D.)		p-value
	Gifted (n=51)	Ordinary (n=49)	
B1. I feel like I am not doing well enough compared with other students in the class.	3.49 (0.98)	3.36 (1.09)	.56
B2. I sometimes find all my assignments overwhelming.	3.00 (0.84)	3.14 (1.09)	.47
B3. I am unable to cope with solitariness.	2.67 (0.92)	2.87 (1.05)	.34
B4. I find it difficult to focus and uncomfortable when I'm in class with unfriendly peers	2.88 (1.08)	2.77 (1.08)	.62
B5. It frustrates me when I fail the examination or the course even though I tried my best	4.00 (0.95)	3.85 (1.13)	.50
B6. I think teachers should respect my rights in class (right to receive fairness, right to explain.)	4.27 (0.98)	3.89 (1.14)	.08
B7. I feel frustrated when I don't understand the class contents and get scolded by my teacher.	3.39 (1.04)	3.73 (0.99)	.10
B8. It discourages me when my parents blame me for my bad learning performance rather than encouraging me to improve myself.	3.07 (1.18)	3.32 (1.24)	.31
B9. I gradually lost my motivation and performance while I've been forced to study.	3.27 (1.28)	3.38 (1.16)	.65
B10. I think my parents are proud of me.	3.96 (1.18)	3.93 (1.02)	.92
B11. I think I study in a good program/school.	3.62 (1.11)	3.89 (1.03)	.21
Overall	3.76 (0.61)	3.82 (0.62)	.66

It can be seen in Table 4 that the participants in gifted classes rated question B6: 'Teachers should respect my rights.' at the highest score at 4.3. On the other hand, participants in the ordinary classes rated the highest scores in five questions which are question B5, B6, B9, B10 and B11 at 3.9. However, the statistical analysis showed no significant difference on the results of survey on this part between the two programs.

The overall results also indicated that the participants experienced social environments that had neutral effects on learning performance: mean score = 3.3 equally between gifted and ordinary programs (Table 3). However, the mean scores of how social environments affected self-concept were at a high level: 3.8 equally between gifted and ordinary programs (Table 4).

Comparison between Genders

Despite the statistical results showed significant differences between participants in gifted and ordinary programs on a few questions, the overall scores between the two groups showed no significant difference on the social environments affecting their learning performances or their self-concept. Consequently, we analyzed the data again by comparing the results of the survey between genders. Results of the analysis were presented in Table 5.

Table 5 Experience of social environments effects on learning performance by genders

Questions	Mean (S.D.)		p-value
	Males (n=30)	Females (n=70)	
A10. My parents expect me to achieve at least a bachelor's degree.	3.60 (1.24)	4.27 (0.99)	<.01*
A11. I received compliments/rewards from my parents when I do well at school.	3.63 (1.09)	4.17 (0.97)	.02*
A12. I can do whatever I like in my free time.	4.10 (0.88)	4.28 (0.95)	.36
Overall	3.17 (0.33)	3.35 (0.33)	.015*

* Statistical significance at alpha level 0.05

Table 5 showed the comparison between genders on the effects of social environments on learning performance. Note that all questions in Table 5 were similar to questions in Table 3 above and the results of question A1-A9 did not show significant difference. Consequently, only question A10-A12 are presented here. It can be seen that the overall results showed significant difference (males = 3.2, females = 3.4, p-value = .015). In other words, female students in our study received greater effects from social environments than male students in terms of learning performance. Further, a significant difference was found on question A10: 'My parents expect me to achieve at least a bachelor's degree' (statistical significance, p-value < .01) and question A11: 'I received compliment/rewards from my parents when I do well at school.' (statistical significance, p-value = .02). These indicated that female participants experienced these two questions significantly more than male participants.

The social environments that affected to self-concept were also compared between genders, and the results of the statistical analysis were presented in Table 6.

Table 6 The effects of social environment on one's self-concepts by genders

Questions	Mean (S.D.)		p-value
	Males (n=30)	Females (n=70)	
B5. It frustrates me when I fail the examination or the course even though I tried my best.	3.40 (1.10)	4.15 (0.94)	<.001*
B10. I think my parents are proud of me.	3.53 (1.27)	4.13 (0.97)	.02*
Overall	3.58 (0.64)	3.88 (0.58)	.04*

* Statistical significance at alpha level 0.05

Table 6 presented the effects of social environment on one's self-concepts by genders. Note that all questions in Table 6 were similar to questions in Table 4 above and the results of the survey showed significant difference only on question B5, B10 and the overall result which are presented here.

As can be seen, the overall score showed a significant difference between the two groups in which female participants received greater effects from social environments on self-concepts (males = 3.6, females = 3.9, p-value = .04). Also, female participants rated question B5 'It frustrates me when I failed the examination or the course even though I tried my best.' and question B10 'I think my parents are proud of me' significantly higher than male students (statistical significance, p-value < 0.001 and p-value = .02 respectively). Overall, the results of analysis in Table 6 were similar to those in Table 5 that social environments affected female students more than male students. Further significant comments from the questionnaire were presented below.

Significant Comments

The last question was an open-ended question which invited participants to give free comments. Note that it was uncertain to identify genders of the participants in the comments. We found positive comments from the participants in the gifted program such as 'In any social environment, in the end of the day, studying depends on oneself', 'short class time limited time of learning', 'social environment greatly affects my learning', 'positive social environment affects my learning positively'.

On the other hand, participants from ordinary classes commented that 'Sometimes I want to drop out of school because studying is stressful and I have to help my parents at work.', 'It is hard to study in a bad social environment. Thus, social environment should be arranged for students to study happily'.

Discussion

Experiences of Social Environments that Affect Learning Performance

Comparing gifted and ordinary programs, it was found that both appeared to have similar

rating patterns on social environments that affect learning performance. The statistical analysis showed no significant difference in overall score except on question A3 only: 'My peers treated me badly' that the ordinary classes rated significantly higher than gifted class.

Nevertheless, when compared between genders, it was found that female participants rated significantly higher on question A10: 'My parents expect me to achieve at least a university degree and question A11: I received compliments/rewards from my parents when I do well at school.' The overall score showed a significant difference between genders.

The results of the analysis pointed out that the bullying problem is more serious in ordinary classes than in gifted classes. The significant difference was not in the curriculum distinctions between the two programs but lay in the gender differences. The analysis showed that, female participants in this survey experience greater effects of social environment on their learning performance.

As explained by Pekrun and Stephens (2015) social environments had important roles on learners' performance. Positive social environments supports learners to achieve better academic performance. The results revealed that questions related to the factor of learning environment such as question A2 (the overwhelming assignments from classroom), A9 (allowing to choose a study program) and A12 (spending free time) were rated the highest. This indicated that the factor of learning environment was the more significant in this study. This result corresponded to previous studies that learning environment had significant effects on learning performance (Sun, Hendrickx, Goetz, Wubbels, & Mainhard, 2020; Shao, Pekrun, & Nicholson, 2019).

The Effects of Social Environment on One's Self-concepts

The results of the analysis showed similar trends to the previous part, that there were no significant differences between the two programs. However, when compared between genders, it was found that female students received greater effects from social environments on their self-concept. As can be seen, the overall score of female students was significantly higher than that of male students (statistical significance, p -value = .04). Also, female students rated question B5: 'It frustrates me when I failed the examination...' and question B10: 'I think my parents are proud of me.' significantly higher than their counterparts (statistical significance, p -value < .01 and p -value = .02 respectively).

As in the previous part, It was found that the social environments that affected one's self-concept was not in the curriculum difference but rather in genders. Female participants of the study were more prone to be affected by social environment when it comes to self-concept.

The results revealed that the questions on the attribution factor such as question B6 (Teachers should respect students), and B10 (My parents are proud of me.) were rated the most important factor for students in the gifted program whereas students in the ordinary program did not give importance to a particular factor in this study.

Conclusion and Suggestions

This study surveyed social environments that affect typical high school students in southern Thailand on two aspects: learning performance and self-concept. The participants studied in two different programs: gifted and ordinary. It was hypothesized that students in gifted program would experience greater effects from social environments due to the more challenging curriculum that they studied.

Results of the analysis contrasted with the hypothesis of the study. It was found that participants in the two programs showed no significant difference in the effects of social environments on both learning performance and self-concept. Nevertheless, significant differences were found between genders. Statistical analysis revealed that female students experienced effects of social environments more than males on both aspects. From the results and discussions, it could be suggested that social environments affected the participants more seriously in terms of self-concept and affected females more than males.

The results of the analysis can be beneficial to educators to explain the effects on students of social environments which can be different in different schools. Strategies to help students to cope with the effects of social environments should be planned and implemented. For example, the school where the survey was conducted should pay particular attention to female students, especially on their self-concepts and on the factor of attribution which is the relation between students and surrounding people such as teachers and friends. A workshop consultancy should be arranged to provide advice for students who may have psychological problems coping with social environments. Since the results showed gender differences, female consultants should be employed to serve female students.

Limitation of the study should be noted here that this survey was conducted online during the COVID-19 pandemic situation. For further studies, the researchers suggest that this kind of survey should be conducted in traditional classrooms in multiple schools to confirm the result of the study and for better understanding the psychological problems relating to social environments affecting students. Bigger projects with more participants could provide useful guidance for educators and policy makers for the development and design curriculums and learning environments which will benefit both students and the country as a whole.

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References

- Boyce, S., Bazargan, M., Caldwell, C.H., Zimmerman, M.A., & Assari, S. (2020). Parental educational attainment and social environment of urban public schools in the U.S.: Blacks' diminished Returns. *Children*, 7(5), 1-11. <https://doi.org/10.3390/children7050044>

- Barnett, E., & Casper, M. (2001). A definition of "Social Environment". *American Journal of Public Health*, 91(3), 465-470.
- Dania, P.O. (2014). Effect of gender on students academic achievement in secondary school social studies. *Journal of Education and Practice*, 5(21). 78-84.
- Haertel, G.D., Walberg, H.J., & Weinstein, T. (1983). Psychological models of educational performance: A theoretical synthesis of constructs. *Review of Educational Research*, 53(1), 75-91. <https://doi.org/10.3102/00346543053001075>
- Hallinan, M.T., & Kubitschek, W.N. (1999). Curriculum differentiation and high school achievement. *Social Psychology of Education*, 3, 41-62.
- Lui, W.C., & Wang, C.K.J. (2005). Academic self-concept: A cross-sectional study of grade and gender differences in a Singapore secondary school. *Asia Pacific Education Review*, 6(1), 20-27.
- Marsh, H.W. (1987). The big-fish-little-pond effect on academic self-concept. *Journal of Educational Psychology*, 79(3), 280-295. <https://psycnet.apa.org/doi/10.1037/0022-0663.79.3.280>
- Nuangchalerm, P. (2013). *Research in learning and teaching* (2nd ed.). Bangkok: Chulalongkorn University Press.
- Pekrun, R., & Stephens, E.J. (2015). Self-concepts: Educational Aspects. In Wright, J.D. (Ed.). *International encyclopedia of the social & behavioral sciences (Second Edition)* (pp. 469-474). Elsevier. <https://doi.org/10.1016/B978-0-08-097086-8.92018-X>
- Shao, K., Pekrun, R., & Nicholson, L.J. (2019). Emotions in classroom language learning: What can we learn from achievement emotion research?. *System*, 86, 1-11. <https://doi.org/10.1016/j.system.2019.102121>
- Summers, J.J., Waigandt, A., & Whittaker, T.A. (2005). A comparison of student achievement and satisfaction in an online versus a traditional face-to-face statistics class. *Innovative Higher Education*, 29(3), 233-250. <https://doi.org/10.1007/s10755-005-1938-x>
- Sun, X., Hendrickx, M., Goetz, T., Wubbels, T., & Mainhard, T. (2020). Classroom social environment as student emotions' antecedent: Mediating role of achievement goals. *The Journal of Experimental Education*, 90(1), 146-157. <https://doi.org/10.1080/00220973.2020.1724851>
- Tornare, E., Czajkowski, N.O., & Pons, F. (2015). Children's emotions in math problem solving situations: Contributions of self-concept, metacognitive experiences, and performance. *Learning and Instruction*, 39, 88-95. <http://dx.doi.org/10.1016/j.learninstruc.2015.05.011>
- Walberg, H.J. (1980). A psychological theory of educational productivity. In Farley, F.H., & Gordon, N. Gordon (Eds.). *Psychology in education* (pp. 81-110). Berkeley: McCutchan.
- Yamane, T. (1967). *Statistic: An introductory analysis* (2nd ed.). New York: Harper and Row.