Higher Education Studies; Vol. 13, No. 2; 2023
ISSN 1925-4741 E-ISSN 1925-475X
Published by Canadian Center of Science and Education

Comparing the Self-regulation of Grade 9th Students with Different Personalities and Studying in Schools of Different Sizes

Songsak Phusee-orn[1] & Sasipat Pongteerawut[2]

[1] Faculty of Education, Mahasarakham University, Mahasarakham, Thailand

[2] Payu Wittaya School, Srisaket, Thailand

Correspondence: Songsak Phusee-orn, Faculty of Education, Mahasarakham University, Mahasarakham, Thailand. Tel: 87-872-7151. E-mail: songsak.p@msu.ac.th

Received: April 10, 2023 Accepted: April 25, 2023 Online Published: April 26, 2023

doi:10.5539/hes.v13n2p106 URL: https://doi.org/10.5539/hes.v13n2p106

Abstract

The objective of this research is to study and compare the self-regulation of grade 9th students with different personality types and who study in schools of different sizes. The sample group used in this study consisted of 860 students from Sisaket province, Thailand, who were randomly selected through a multi-stage random sampling method. Of these, 185 students had an extroverted personality type, while 675 had an introverted personality type, and they were studying in special large schools (216 students), large schools (160 students), medium-sized schools (302 students), and small schools (182 students). The research tool used was a self-regulation assessment questionnaire, which is a 5-point Likert scale questionnaire with 9 questions, having an internal consistency (IOC) ranging from 0.60 to 1.00, item total correlation ranging from 0.62 to 0.82, and reliability of 0.93. The data was analyzed using statistical techniques such as mean, standard deviation (S.D.), Two-way ANOVA, and Bonferroni. The research findings revealed that: 1) there was no interaction between personality type and school size in relation to self-regulation, 2) grade 9th students with different personality types (extroverted vs. introverted) showed statistically significant differences in self-regulation, with introverted students having higher levels of self-regulation than extroverted students, and 3) grade 9th students who studied in schools of different sizes (special large, large, medium, and small) showed significant differences in self-regulation.

Keywords: self-regulation, personality, extrovert, introvert, school size, Grade 9 students

1. Introduction

Self-regulation is a crucial aspect for all students at all levels, as it has a significant impact on their development in various areas, including learning, creativity, discipline, and readiness to become successful adults in the future. Starting with learning, self-regulation helps students to have clear goals and methods for learning, such as planning, setting learning objectives, and analyzing learning outcomes. When students can self-regulate effectively in their learning, they will have the essential factors for successful learning, which are motivation and effort, as found by Aregu (2013) and Schunk and Zimmerman (2007). Learning through self-regulation also leads to higher reading comprehension and academic achievement in various subjects.

In addition, self-regulation helps students develop discipline and creativity. Creativity is essential for personal development, and self-regulation in creative pursuits enables students to plan and create new things that are beneficial to their lives and learning. Self-regulation is a process that helps us develop ourselves in various areas, such as learning, work, and personal life. When we can self-regulate well, we can improve and develop ourselves more effectively. There are many benefits to self-regulation, such as setting goals and achieving success more easily. Self-regulation helps us set goals and develop effective plans to achieve success. With self-regulation, we know what needs to be done, how to do it, and when we have achieved success, we feel good and develop ourselves in a positive direction. Additionally, self-regulation helps to increase confidence and problem-solving skills. Self-regulation helps us have confidence in ourselves and solve problems effectively. Students who can self-regulate well can develop problem-solving skills effectively. When problems arise and are aligned with Schunk's (1991) study that found that high-performing individuals resulted from setting goals more frequently and using them more than low-performing individuals. Moreover, students are motivated to achieve their planned goals and have a strong intention to work hard towards their high-level goals

Learning and self-regulation of students depend on various factors such as personality, culture, environment, and previous life experiences. Particularly, the learning experience in schools of different sizes may have an impact on students' self-regulation. For instance, in large schools with many students, self-regulation can be complex and require careful planning. Students in such schools need to learn time management and planning skills to work efficiently. Furthermore, they need to try to become part of a diverse community of students and connect with others to build relationships. On the other hand, students in small schools often have a more family-like atmosphere that can be enjoyable. They usually know everyone in their class, and it may be easier for them to receive help from teachers and classmates. In such cases, strict self-regulation may not be necessary.

Researchers are interested in whether self-regulation differs among students in schools of different sizes and with different personalities. Some students may be confident and assertive leaders, while others may lack confidence and be shy. The investigation of these differences in self-regulation can be beneficial for planning and developing students' self-regulation skills in various groups.

2. Objectives of the Study

The objectives of this research are to study the interaction between personality and school size that affects self-regulation, to compare the self-regulation of students with different personalities and to compare the self-regulation of students studying in schools of different sizes.

3. Method

3.1 Population and Sample

The population used in this research consists of 6,798 Grade 9th students from the second semester of the 2020 academic year in Sisaket Province, under the jurisdiction of the Sisaket-Yasothon Secondary Education Area Office. These students come from 56 schools of various sizes, including extra-large, large, medium, and small schools. The sample used in this research consists of 860 Grade 9th students from the second semester of the 2020 academic year in Sisaket Province, under the jurisdiction of the Sisaket-Yasothon Secondary Education Area Office. These students are from 12 schools and are enrolled in regular classrooms. They were selected through a multi-stage random sampling process, consisting of 216 students from extra-large schools, 160 students from large schools, 302 students from medium-sized schools, and 182 students from small schools.

3.2 Research Instruments

The self-regulation measurement for Grade 9 students is a 5-point Likert scale, divided into three aspects: 1) Self-Control, 2) Self-Improvement, and 3) Changing Ourselves. Each aspect contains three items, totaling nine items.

3.2.1 Scoring Criteria

The measurement used in this research is a 5-point rating scale with the following scoring criteria: 5 points: The statement corresponds to the student's level of reality to the greatest extent, 4 points: The statement corresponds to the student's level of reality to a large extent. 3 points: The statement corresponds to the student's level of reality to a moderate extent. 2 points: The statement corresponds to the student's level of reality to a small extent. 1 point: The statement corresponds to the student's level of reality to the smallest extent. For interpreting the meaning of the measured values, the researcher has established the following criteria based on average scores per range and per item: 4.51 – 5.00 points: The student has the highest level of self-regulation. 3.51 – 4.50 points: The student has a high level of self-regulation. 2.51 – 3.50 points: The student has a moderate level of self-regulation. 1.51 – 2.50 points: The student has a low level of self-regulation. 1.00 – 1.50 points: The student has the lowest level of self-regulation.

3.2.2 Steps in Creating and Quality Checking of the Measurement

1) Define the objectives for creating the measurement instrument. 2) Study the concepts, theories, and related research to determine operational definitions. 3) From the operational definitions, create a self-regulation measurement instrument using a 5-point rating scale. 4) The researcher takes the questionnaire, along with the research topic details, to analyze content validity by calculating the Index of Item-Objective Congruence (IOC) with the help of five experts. 5) Summarize the opinions of the five experts and select questions with an IOC value of 0.50 or higher. It is found that the IOC values range from 0.60 to 1.00. Revise the questions based on the experts' suggestions before modifying the instrument to be appropriate for a pilot test. 6) Test the revised questionnaire (Try Out) with 30 Grade 9 students from the same population but not in the sample group. 7) Analyze the discrimination power using the item-total correlation method. Consider selecting questions that have a positive relationship with the total score, with statistical significance at the .05 level. The values range from .57

to .75, all of which are statistically significant. 8) Analyze the reliability using Cronbach's Alpha Coefficient. The reliability of the whole questionnaire is found to be .93. 9) Print the final version of the questionnaire to be used for data collection with the actual sample group.

3.3 Data Collection

1) Prepare a letter requesting research collaboration from the Faculty of Education, Mahasarakham University, to submit to the school director, asking for permission and assistance in collecting research data from the sample schools. Also, provide an explanation of the procedures for collecting data from the student sample group. 2) Coordinate with the academic head of the sample schools to schedule dates and times for data collection in person, and request assistance from teachers in some schools to collect data. Conduct training and provide guidelines for the teachers to understand the process before data collection. 3) Prepare questionnaires and measurement tools, ensuring there are enough copies for the student sample group. 4) Travel to collect data in person according to the scheduled dates and times. 5) Check the returned questionnaires and measurement tools for the completeness of the data, and code the data in preparation for further data analysis

3.4 Data Analysis

The data are analyzed with mean, standard deviation, Two-way ANOVA and Bonferoni

4. Results

The Results of A Study Present in Tables 1-3

Table 1. Comparing the self-regulation of students with different personalities and studying in schools of different sizes

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
School Size	10.347	3	3.449	11.508	<.001
Personality Type	4.726	1	4.726	15.768	<.001
Size * Personality type	.286	3	.095	.318	.812
Error	255.361	852	.300		
Total	13942.308	860			

From the table 1, it was found that there was no interaction between school size and type of personality that affected students' self-regulation. However, when considering independent variables separately, it was found that students studying in schools of different sizes and with different types of personalities had significantly different levels of self-regulation, with statistical significance at the .05 level. Therefore, multiple comparisons testing was conducted.

Table 2. Multiple Comparison (School size)

(I) Size	(J) Size	Mean Difference (I-J)	Std. Error	Sig.
1	2	-.093	.068	1.000
	3	.193*	.060	.008
	4	.255*	.070	.002
2	1	.093	.068	1.000
	3	.285*	.062	<.001
	4	.348*	.072	<.001
3	1	-.193*	.060	.008
	2	-.285*	.062	<.001
	4	.063	.064	1.000
4	1	-.255*	.070	.002
	2	-.348*	.072	<.001
	3	-.063	.064	1.000

Note 1= extra-large size schools, 2=large size school, 3=medium size school, 4=small size school

From the table 2, it was found that students studying in large and extra-large size schools have higher self-regulation than those in medium and small size schools, which is statistically significant at the .05 level, while other pairs do not differ.

Table 3. Multiple Comparison (Personality Types)

(I) Personality	(J) Personality	Mean Difference (I-J)	Std. Error	Sig.
Extroverted	Introverted	-.186*	.047	<.001
Introverted	Extroverted	.186*	.047	<.001

From the table 3, it was found that Grade 9th students with different personality types (extroverted vs. introverted) showed statistically significant differences in self-regulation, with introverted students having higher levels of self-regulation than extroverted students.

5. Conclusion

The research findings revealed that: 1) there was no interaction between personality type and school size that effect to self-regulation, 2) Grade 9th students with different personality types (extroverted vs. introverted) showed statistically significant differences in self-regulation, with introverted students having higher levels of self-regulation than extroverted students, and 3) Grade 9th students who studied in schools of different sizes (extra large, large, medium, and small) showed significant differences in self-regulation.

6. Discussion

According to research, Grade 9th students with different personality types (extroverted vs. introverted) showed statistically significant differences in self-regulation, with introverted students having higher levels of self-regulation than extroverted students. This may be because introverted students tend to have a high level of personal space, enjoy being alone, and have a small circle of close friends. As a result, they often rely heavily on self-planning and self-direction as they do not have others to guide them. They need clear goals, as Maria & Maria Luisa Sanz de Acedo (2010) pointed out that goal-setting is an important process in self-direction, which involves setting quantitative or qualitative standards for behavior. On the other hand, extroverted students tend to have good social skills, get along with everyone, and have many friends. Therefore, they may be more relaxed about various issues as they have people around them to stimulate and assist them. This may lead to lower levels of self-direction compared to introverted students.

In another study, it was found that self-regulation among students differed depending on the size of the school they attended. Students in large and special schools had higher levels of self-regulation than those in medium-sized and small schools. This may be because in the context of large and special schools, there are a large number of people, making it difficult to manage activities, care, and communication within the school community. Therefore, students studying in large and special schools need to take care of themselves and manage their time effectively to carry out activities within the school efficiently. As Wolters & Brady (2020) pointed out, time management is part of the key to success in learning.

On the other hand, students studying in medium-sized and small schools have relatively few students, and teachers generally know their students well and can take care of them closely and comprehensively. Therefore, these students may not need to be as strict or self-directed as they have teachers who provide assistance in various areas. This is in line with Lin's (2018) statement that the learning environment in the classroom affects self-direction in learning. Baumeister & Vohs (2004) also mentioned that self-direction is a diverse set of abilities related to self-regulation of emotions and behavior

7. Research Suggestions

7.1 These are the Suggestions from the Study

Finding ways to promote self-regulation among high school students, particularly those studying in large and specialized schools and extroverted students who are at risk of low self-regulation, is crucial for their academic success. This is supported by Eilamand Aharon's (2003) research on students' self-regulation planning processes, which found that students who plan well in advance perform better academically than those who do not. Dembo and Seli (2008) also found that students with self-regulation are better able to overcome academic challenges and handle academic workloads. Additionally, Pintrich (2004) highlighted the importance of self-regulation in goal-setting, learning control, motivation, and behavior. This is consistent with Lin et al.'s (2023) study, which found that students with higher self-efficacy and self-regulation strategies had better academic performance**.**

7.2 Future Research Recommendation

1) There should be a study to develop a self-regulation-promoting program for students, especially those studying in medium and small schools, as well as for students with extroverted personality traits. 2) A causal factor study should be conducted to identify various factors affecting students' self-regulation. This information

is crucial for further development of self-regulation strategies. 3) A long-term study on self-regulation development should be conducted for students of different age groups, along with identifying the obstacles that occur during each developmental stage.

Acknowledgments

I would like to thank you so much for the research samples and the experts who checked the quality of the tools. I would like to thank the students who helped in collecting the data.

References

Aregu, B. B. (2013). A study of self-regulated learning strategies as predictors of critical reading. *Educational Research and Review, 8*(21), 1961-1965.

Baumeister, R. F., & Vohs, K. D. (2004). Sexual Economics: Sex as Female Resource for Social Exchange in Heterosexual Interactions. *Personality and Social Psychology Review, 8*(4), 339-363. https://doi.org/10.1207/s15327957pspr0804_2

Dembo, H. M., & Seli, H. (2008). *Motivation and Learning Strategies for College Success: Self-Management Approach*. New York: Routledge. https://doi.org/10.4324/9780203823149

Eilam, B., & Aharon, I. (2003). Students' planning in the process of self-regulated learning. *Contemporary Educational Psychology, 28*(3), 304-334. https://doi.org/10.1016/S0361-476X(02)00042-5

Lin, J. (2018). Effects of an Online Team Project-based Learning Environment with Group Awareness and Peer Evaluation on Socially Shared Regulation of Learning and Self-regulated Learning. *Behaviour & Information Technology, 37*(5), 445-461. https://doi.org/10.1080/0144929X.2018.1451558

Lin, S., Mastrokoukou, S., Longobardi, C., Bozzato, P., Gastaldi, F. G. M., & Berchiatti, M. (2023). Students' Transition into Higher Education: The Role of Self-Efficacy, Regulation Strategies, and Academic Achievements. *Higher Education Quarterly, 77*(1), 121-137. https://doi.org/10.1111/hequ.12374

Maria, C., & Maria Luisa Sanz de Acedo, L. (2010). Looking at teacher Identity through self-regulation. *Psicothema, 22*(2), 293-298.

Pintrich, P. (2004). A Conceptual Framework for Assessing Motivation and Self-regulated Learning in College Students. *Educational Psychology Review, 16*(4), 385-407. https://doi.org/10.1007/s10648-004-0006-x

Schunk, D. H., & Zimmerman, B. J. (2007). Influencing children 's self-efficacy and self-regulation for reading and writing through modeling. *Reading & Writing Quarterly, 23*(1), 7-25. https://doi.org/10.1080/10573560600837578

Schunk, D. H. (1991). Self- efficacy and academic motivation. *Educational Psychologist, 26*, 207-231. https://doi.org/10.1080/00461520.1991.9653133

Wolters, C. A., & Brady, A. C. (2020). College Students' Time Management: A Self-regulated Learning Perspective. *Educational Psychology Review, 33*, 1319-1351. https://doi.org/10.1007/s10648-020-09519-z

Yıldırım, T., & Koçak, Ç. V. (2022). The Relationship between Sport, SelfRegulation and School Burnout in High School Students. *Education Quarterly Reviews, 5*(3), 421-430. https://doi.org/10.31014/aior.1993.05.03.556