



Assessing the Self-Leadership and Academic Performance of the Selected Students of Philippine Science High School – SOCCSKSARGEN Region Campus Students

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How to cite this paper:

Barluado, B. Jr. (2023). Assessing the Self-Leadership and Academic Performance of the Selected Students of Philippine Science High School – SOCCSKSARGEN Region Campus Students. Wesleyan Scientific Review 2(1).

<http://doi.org/10.54788.wsr2023.v2i1a03>

Received: September 7, 2022

Reviewed: March 12, 2023

Accepted: March 30, 2023

Published: May 31, 2023

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<https://www.wesleyan.edu.ph/journals/index.php/WSR/index>

Abstract

Studies concerning self-leadership in college students have been explored, and academic performance through external assessments has been explored. Meanwhile, self-leadership among high school students concerning their academic performance should be studied to provide meaningful insight into their potential role as future leaders. The study looked at whether there is an association between self-leadership and academic performance among students at the Philippine Science High School - SOCCSKSARGEN Region Campus (PSHS-SRC). The abbreviated self-leadership questionnaire (ASLQ) gauged the levels of self-leadership of PSHS-SRC students and their academic performance through their general weighted average (GWA) of the second quarter of the school year 2021–2022. A T-test and ANOVA were used to determine the association between self-leadership and academic performance. With a mean score of 4.03, PSHS-SRC students have a generally high level of self-leadership, particularly in the domains of task motivation (*item 6; 4.20*) and constructive cognition (*item 7; 4.45*). Self-leadership scores of female students are higher than those of male students, but contrary to previous research, it was discovered that there is no association between self-leadership, age, grade level, and academic performance. It was interesting to note that the study was conducted on high school students rather than university students and professionals, which contradicted the results of the latter. Furthermore, the development of future school policies can use the research as a platform to build curricula and educational environments designed to display, highlight, and foster self-leadership among students to complement their academic performance.

Keywords: self-leadership, academic performance, academic achievement, self-motivation; social cognitive theory, secondary education, leadership studies



INTRODUCTION

Leadership has been viewed as a quintessential attribute since time immemorial. Leadership is defined as the process of how an individual, through his skills and innate qualities of confidence, grit, vision, values, honesty, integrity, and transparency, influences an individual or a group to attain a specific objective or goal (Muteswa, 2016). Moreover, top leaders of various professions and organizations associate their professional and managerial success with their discipline and execution (Goldsby et al., 2021). This foundational concept of leading oneself before leading others is referred to as "self-leadership." Klosel (2022) described self-leadership as a self-influencing procedure that involves raising one's drive, motivation, and self-control to the degree required to achieve the desired performance or result.

Herdem (2019) discussed how self-leadership differed by gender and recommended that the self-leadership skills of university students, particularly the male student body, be honed. Consequently, levels of self-leadership among university students are high, while their levels of critical thinking are moderate (Ay et al., 2015). Furthermore, in a study conducted by Lee and Bong (2017) on nursing students, it has been stressed that the development of improved self-directed learning, increased self-leadership, academic self-efficacy, and major self-leadership should be enhanced. Interestingly, it has been highlighted that along with gender, nationality, and engagement in co-curricular activities, overall interest in pursuing higher education degrees has been found to affect 'students' academic performance in tertiary education (Jayanthi et al., 2014). On the other hand, factors such as parental background, school factors, and teacher factors have been studied as seriously influencing college 'student's academic performance (Olufemi et al., 2018).

It has also been examined whether 'learners' comprehension of the language regarding the delivery of lessons and understanding of the written materials significantly affects academic performance. Because the medium of instruction and learning materials are often written in English, learners with poor mastery of the English vocabulary have a limited grasp and understanding of their subjects, resulting in poor academic performance (Maganga, 2016). These factors are perceived as external since they do not highlight students' innate internal drive and motivation. In addition, thorough assessment and exploration are needed to establish whether gender, age, and leadership experience are significantly associated with self-leadership. Although pursuing a higher education degree has been viewed as a factor affecting academic performance, it has not been thoroughly discussed whether such a factor is indicative of self-leadership.

Meanwhile, a study centered on the levels of self-leadership among high school students concerning their academic performance should be examined to provide meaningful insight into their potential role as future managers and front-runners in their respective fields. This research could encourage other academics and researchers to study and measure young adults' leadership capacity and potential, particularly high school students. In line with this potential, the concretization of the imperative notion that there exists a relationship between academic performance and self-leadership will be academically acknowledged. The development of future school policies can use the research as a platform to build curricula and educational environments designed to display and highlight self-leadership among students to complement their academic performance. Specifically, the results of the



research will provide direction as to how leadership training and seminars are constructed for the benefit of the scholars of PSHS–SRC.

To provide direction on the conduct of leadership training and seminars, the design, planning, and implementation of such activities should be anchored in shaping scholars to have (a.) better self-awareness and the elimination of undesired behavior, (b.) heighten 'scholars' motivation and make them appreciate the reward of meeting worthwhile objectives, and (c.) develop and practice their use of mental imagery for the projection of success once a goal has been achieved. In addition, the diversification of leadership opportunities for students within PSHS SRC should be prioritized to provide the scholars with the necessary leadership space for them to expand their abilities. Evaluating the levels of self-leadership and academic performance among high school students, particularly in the Philippine Science High School SOCCSKSARGEN Region Campus (PSHS-SRC), will also gauge the adherence of PSHS-SRC to the mandate of the Philippine Science High School System of producing globally competitive scholars imbued with the values of truth, excellence, and service to the nation.

Self-Leadership

Holroyd et al. (2015) defined self-leadership as a process through which individuals bring to light behaviors in combination with their motivation that are essential to completing tasks. Intrinsic motivation lies at the core of self-leadership, wherein personal rewards are derived not from external motivation but rather from intrinsic satisfaction (Mahembe et al., 2016). The idea of self-leadership was conceptualized by Charles C. Manz in his academic work, "Self-leadership: Toward an Expanded Theory of Self-Influence Processes in Organizations" (Goldsby et al., 2021). Uzman and Maya (2019) enumerated and explained that there are three classifications of self-leadership: behavior-focused strategies, natural reward strategies, and constructive thought pattern strategies.

Behavior-focused strategies aim to forge an individual's self-awareness to manage behaviors that are deemed beneficial to the completion of a task while disposing of behaviors that impede the attainment of objectives (Aldighrir, 2019). Natural reward strategies are the ability of individuals to derive satisfaction, a sense of accomplishment, and a sense of fulfillment through the utilization of innate tools in the accomplishment of tasks (Furtner and Rauthman, 2013). Constructive thought pattern strategies explain the importance of mental imagery, wherein the construction of cognitive imagery before the actual task at hand is vital to goal completion (Semerci, 2019). Charles C. 'Manz's work on self-leadership is anchored on the Social Cognitive Theory pioneered by Albert Bandura, which highlighted the self-management of individuals as a force that drives them to pursue their goals through the conscious organization and management of their thoughts, behavior, and environment (Goldsby et al., 2021).

Measurement of Self-leadership

Charles Manz and Henry Sims established the first prototypical psychometric instrument for measuring self-leadership, wherein a 21-question test was developed in 1987 that was aimed to gauge self-leadership in three categories: behavioral, cognitive, and natural reward (Neuhaus, 2021). Rooted in previous self-leadership scales developed by Jonathan F. Cox, Joe S. Anderson, Gregory Prussia,



Jeffrey D. Houghton, and Christopher P. Neck developed the Revised Self-Leadership Questionnaire (RSLQ), which contains 35 questions aimed at measuring behavior focus, natural reward, and constructive thought (Boonyarit, 2021). A shortened version of the RSLQ, the Abbreviated Self Leadership Questionnaire (ASLQ) is a nine-item questionnaire aimed at measuring the self-leadership dimensions of a.) behavior awareness and volition—the examination of 'one's behaviors and whether they should be removed, enhanced, or added for the completion of a task or objective; b.) task motivation—an 'individual's enjoyment of a task and development of self-fulfillment and self-competence; and c.) constructive cognition—the positive and optimistic thought processes of an individual that have a significant impact on performance (Sahin, 2015). Ioannis (2019) investigated the validity of the Revised Self-Leadership Questionnaire (RSLQ) through a study implemented in a Greek population, wherein it yielded a statistical result supporting the RSLQ's validity. Furthermore, it has been espoused that both the Revised Self-Leadership Questionnaire (RSLQ) and the Abbreviated Self-Leadership Questionnaire (ASLQ) have shown psychometric validity among a sampled South African population, and it was also noted that the administration of the ASLQ saved time and was, therefore, more efficient (Nel and Van Zyl, 2015; Mahembe et al., 2016).

Academic Performance

Academic performance is generally a quantitative result based on the assessments of instructors during or after the learning process, which may be in the form of written or unwritten evaluations or .Q.I.Q. tests (Martin et al., 2017). The degree to which educational success is measured goes hand in hand with the 'person's academic performance (Brew et al., 2021). Many factors could affect academic performance. Martin et al. (2017) discussed that personality, particularly neuroticism, has been linked to low academic performance. Ali et al. (2013) highlighted that age, father/guardian social-economic status, and daily study hours greatly supplement academic performance. Truancy, parental levels of education and income, textbook availability and accessibility, libraries, practical laboratories, meal provision, and teacher monitoring have been shown to affect academic performance (Brew et al., 2021).

Arshad et al. (2015) pointed out that self-esteem and academic scores vary between male and female university students, wherein female students perform well academically while male students have a higher sense of self-esteem. Based on research conducted on freshmen university students, it was elucidated that academic performance is affected by peer academic performance or the selection and creation of social ties with people of similar interests and goals and class attendance (Kassarnig et al., 2017). It is also noted that goal motivation and emotional well-being affect academic success or failure, thereby affirming the need for schools to provide programs and policies to help address 'students' emotional issues and uplift their self-esteem (Gilar-Corbi et al., 2020). However, hindrances to education, particularly among elementary students in a rural setting, include parental educational attainment, occupation, and age (Cheng et al., 2019).

Measurement of Academic Performance

Academic achievement tethered on 'students' age, previous learning experience, and capacity concerning their individual social and learning skills have been used to measure academic



performance, whether through standard written examinations or practical exams (Davidson and Dustova, 2017). On the other hand, the generation of research projects, academic reputations, graduate employability, student-to-faculty ratio, and faculty awards are indicators to measure academic performance among higher educational institutions (Abubakar et al., 2018).

The usage of the general point average (GPA) is widely regarded as a standard measure of academic performance wherein it is a standard gauge of 'students' gained knowledge and skills at the same time, making easy the numerical tabulation and recording of 'student academic progress (Kumar et al., 2021). Aside from academic performance, the GPA is also an indicator of 'students' motivation to learn, punctuality and attendance, and sense of personal achievement (Al Hazaa et al., 2021; Alhadabi and Karpinski, 2019; Cetin, 2015). The concept of self-leadership is associated with the idea of self-management because of the paradigm of goals as a culmination of the conscious effort of an 'individual's synergy of thoughts, behavior, and effort. Due to its time efficiency, the Abbreviated Self-Leadership Questionnaire is a reliable and convenient tool for measuring self-leadership without sacrificing validity. Although academic performance has been pointed out to be affected by demographics, socio-economic status, and the provision of materials essential for learning, such as textbooks, it was also highlighted that social networks, such as peer groups, affect academic performance. In contrast, low academic performance is a consequence of truancy and a lack of devotion to study hours, which consequently affect the morale and self-esteem of learners.

The Research Problem

The research aims to determine whether there is an association between the levels of self-leadership among high school students at the Philippine Science High School SOCCSKSARGEN Region Campus and their academic performance. The study aims to answer the following research questions:

1. What are the levels of self-leadership among high school students at the Philippine Science High School—SOCCKSARGEN Region Campus?
2. What is the academic performance, gender, age, and leadership experience of high school students at the Philippine Science High School-SOCCKSARGEN Region Campus?
3. Is there an association between self-leadership and academic performance among students at the Philippine Science High School—SOCCKSARGEN Region Campus?
4. Is there a significant difference between self-leadership, academic performance, gender, age, and leadership experience among Philippine Science High School—SOCCKSARGEN Region Campus students?

METHODOLOGY

Research Design

This research employed a descriptive correlational research design in which the relationship between the general weighted average (GWA) of Grade 7–12 students from the second quarter of the school year 2021-2022 and their respective responses from the abbreviated self-leadership questionnaire shall be determined. The usage of the descriptive correlational design is warranted since it provides a comprehensive picture of the observed phenomena that occurred at a given time frame



while also providing opportunities for testing the relationships or associations of variables in the said phenomena, which may be used to make valid prognostications (Stangor and Walinga, 2014).

Research Respondents

Bona fide Grade 7–12 students of Philippine Science High School – SOCCSKSARGEN REGION CAMPUS (PSHS—SRC) enrolled in School Year 2021–2022 were the targeted research respondents of the study. Due to the population being mainly composed of minors, only students who agreed to participate with duly obtained parental consent provided by the researcher were included in the study. The PSHS–SRC students were chosen as the target respondents of the study because of their availability and the time and space constraints brought about by the COVID-19 pandemic.

Research Instrument

The Abbreviated Self-Leadership Questionnaire (ASLQ), a nine-item self-administered questionnaire, is divided into three domains with three items allotted to measure each domain. The questionnaire is grouped into questions 1–3, which measure behavior awareness and volition, questions 4–6, which measure task motivation; and questions 7–9, which measure constructive cognition (Sahin, 2015). According to Mahembe et al. (2016), the ASLQ has moderate levels of reliability, with a Cronbach's alpha value of .77, and correlations among the questionnaire's three latent dimensions are within reasonable limits. Boonyarit (2023) identified 'Cronbach's α of the scale as .76 and 'McDonald's ω as .79, showing that the scale was satisfactorily reliable. The 'individuals' responses were measured using a 5-point Likert scale, where one(1) is not at all accurate, two(2) is somewhat accurate, three(3) is a little accurate, four(4) is mostly accurate, and five(5) is completely accurate. Furthermore, the 'respondent's age, gender, general weighted average (GWA) for the second quarter of the school year 2021–2022, and whether they have leadership experience were obtained using the questionnaire.

Data Collection Procedure

This section of the research discusses the preliminary procedures and the data-gathering procedures that were undertaken to collect the necessary data needed to support and identify the association between self-leadership and academic performance. Furthermore, ethical considerations and adherence to minimum health protocols and standards due to COVID-19 were also outlined. Lastly, the treatment of data is explained to ensure its adherence to the research design.

Preliminary Procedures

In compliance with school policy and with ethical considerations in mind, a duly approved parental or guardian consent form was sent to the parents and guardians of the scholars before the administration of the test questionnaire. The parental consent form also contained a clause about whether they agreed or disagreed with allowing the grades and general weighted average of their child to be used in the research. In compliance with protocols, the proper channels and processes for requests to obtain the data regarding the 'scholars' general weighted average (GWA) to be used as the basis for the academic performance of PSHS scholars shall be observed.



Sampling Procedures

The sampling procedure involved in obtaining the sample in the target population is simple random sampling, and 162 Grade 7–12 students from Philippine Science High School—SOCCSKSARGEN Region Campus have acknowledged, through a parent consent form, that they will answer The Abbreviated Self Leadership Questionnaire (ASLQ). In simple random sampling, every representative of the total population of Grade 7–12 students from PSHS–SRC has a chance to be included in the sample size. Furthermore, being a high school educational institution, the structure of the target population is composed of students from Grade 7 to Grade 12 since these are the grade levels currently being offered in the curriculum of the Philippine Science High School—SOCCSKSARGEN Region Campus.

Ethical Considerations

The participation of the scholars in this study was completely voluntary. The parental decision on whether to allow their child to participate in the research will not affect their academic and disciplinary standing. No identifying information about the scholars was collected. To protect the anonymity of the responses, no .P.I.P. addresses, email addresses, or identifying information aside from the 'scholars' gender, grade, and section were collected. A parental consent form was provided to the parents/guardians of scholars who wished to take part in the study.

Treatment of Data

For data evaluation, the data has undergone a series of tests between the variables of interest, the general weighted average (GWA) of grade 7–12 scholars, and the responses of scholars from grades 7–12 to the abbreviated self-leadership questionnaire. The t-test was used to determine whether there is a significant difference between males and females with or without leadership experience. Analysis of Variance (ANOVA) was used to determine whether there is a significant difference in self-leadership between the grade levels, and the Chi-Square Test was used to determine whether there is a significant difference between the general weighted averages of PSHS-SRC scholars and the result of the ASLQ test. The Scheffe post-hoc test will be used to compare means between groups concurrently if there is a significant difference in the ANOVA test.

Figures of the GWA of PSHS Scholars have been presented separately per grade level as well as the result of the Abbreviated Self-Leadership Questionnaire (ASLQ), which was divided into three realms: (1) behavior awareness and volition, (2) task motivation, and (3) constructive cognition, which was presented per grade level. Figures between the general weighted average and the results of the abbreviated self-leadership questionnaire were presented and evaluated across grade levels. A table representing whether there is a significant difference between self-leadership, academic performance, gender, age, and leadership experience among students was also presented. The statistical treatment, evaluation, and presentation were conducted using the statistical software Jamovi.



RESULTS

This section of the paper presents the results from the administration of the abbreviated self-leadership questionnaire on selected PSHS-SRC scholars. Graphs, tables, and charts highlight the gathered data from which the empirical discussion and analysis of the results were derived. The data shows normality based on the Shapiro-Wilkes Test (p -value = .42), wherein the null hypothesis is not rejected, given that the data is normal at 5% significance.

Levels of self-leadership among high school students of Philippine Science High School - SOCKSARGEN Region Campus

Table 1

Abbreviated Self-Leadership Questionnaire (ASLQ) Mean Scores and Remarks

Constructs	Score	Remarks
Establish specific goals for my own performance.	3.94	Mostly Accurate
Make a point to keep track of how well I am doing at work.	3.66	Mostly Accurate
Work toward specific goals I have set for myself.	4.12	Mostly Accurate
Visualize myself successfully performing a task before I do it.	3.86	Mostly Accurate
Sometimes I picture in my mind a successful performance before I do a task.	3.89	Mostly Accurate
When I have successfully completed a task, I often reward myself with something I like.	4.20	Completely Accurate
Sometimes I talk to myself (aloud or in my head) to work through difficult situations.	4.45	Completely Accurate
Try to mentally evaluate the accuracy of my own beliefs about situations I am having problems with	4.11	Mostly Accurate
I think about my own beliefs and assumptions whenever I encounter a difficult situation.	4.07	Mostly Accurate
Overall Rating	4.03	Mostly Accurate

Based on Table 1, students have an overall rating of mostly accurate with a value of 4.03 in the Abbreviated Self-Leadership Questionnaire (ASLQ). Meanwhile, students got a completely accurate rating for statements 6 and 7, which are: "(item 6) When I have successfully completed a task, I often reward myself with something I like." and "(item 7) Sometimes I talk to myself (aloud or in my head) to work through difficult situations." with the values of 4.20 and 4.45, respectively. Item 6 belongs to the dimension of task motivation, while Item 7 fits the element of constructive cognition (Nel and Van Zyl, 2015).



Academic Performance, Gender, Age, and Leadership Experience of High School Students of Philippine Science High School—SOCCSKSARGEN Region Campus

Table 2
General Weighted Average (GWA) Groups and ASLQ Scores

GWA	Average Score	StdDev of Score	Remarks
1.00 - 1.25	4.10	0.49	Mostly Accurate
1.25 - 1.50	4.04	0.53	Mostly Accurate
1.50 - 1.75	3.94	0.51	A Little Accurate
1.75 - 2.00	3.76	0.76	A Little Accurate
2.00 - 2.25	4.00	0.33	Mostly Accurate

As shown in Table 2, General Weighted Average (GWA) groups 1.00–1.25, 1.25–1.50, and 2.00–2.50 in the Abbreviated Self-Leadership Questionnaire scores fall in the same category of "mostly accurate," while GWA groups 1.50–1.75 and 1.75–2.00 ASLQ scores fall in the category of "a little accurate." GWA GGroups range from 1.00–1.25 has the highest ASLQ scores among the group, while GWA groups 1.75–2.00 has the lowest ASLQ scores among the group.

Table 3
Grade Levels and ASLQ Scores

Year Level	Average Score	StdDev of Score	Remarks
7	3.96	0.68	A Little Accurate
8	3.95	0.59	A Little Accurate
9	4.11	0.42	Mostly Accurate
10	4.08	0.48	Mostly Accurate
11	4.08	0.35	Mostly Accurate
12	4.04	0.58	Mostly Accurate

Table 4
Age Groups and ASLQ Scores

Age	Average Score	StdDev of Score	Remarks
12 - 13	3.94	0.68	A Little Accurate
14 - 15	4.04	0.48	Mostly Accurate
16 - 17	4.10	0.42	Mostly Accurate
18 - 19	4.03	0.54	Mostly Accurate

Based on Table 3, the scores of grade level/year level 9 to 12 in the Abbreviated Self-Leadership Questionnaire (ASLQ) fall in the category of "Mostly Accurate," while grade level/year



level 7-8 fall in the category of "A Little Accurate." Table 4 presents data on age groups; the ASLQ scores obtained by age groups 14–15, 16–17, and 18–19 presented all fall into the same category of "Mostly Accurate," while the age group 12–13 ASLQ scores fall into the category of "A Little Accurate." In Table 3, year/grade levels 10 and 11 obtained the highest ASLQ scores, while year/grade level 8 obtained the lowest score. Furthermore, the age group with the highest ASLQ score is the age group 16–17, while the age group 12–13 has the lowest ASLQ scores among the groups in Table 4.

Table 5
ASLQ Scores and Gender

Gender	Average Score	StdDev of Score	Remarks
Female	4.10	0.47	Mostly Accurate
Male	3.97	0.57	A Little Accurate

Table 6
ASLQ Scores and Leadership Experience

Leadership Experience	Average Score	StdDev of Score	Remarks
No	3.97	0.49	A Little Accurate
Yes	4.07	0.53	Mostly Accurate

Figure 5 showed that female ASLQ scores are higher and fall in the category of "Mostly Accurate" compared to the ASLQ scores of males, which fall in the category of "A Little Accurate." In Table 6, those with leadership experience have higher ASLQ scores compared to those who have no leadership experience. The scores of those with leadership experience fall under the category of "Mostly Accurate," while the scores of those without leadership experience fall under "A Little Accurate."

Association and Significant Difference between Self-Leadership and Academic Performance among Students of Philippine Science High School – SOCKSARGEN Region Campus

Table 7
Variables of Interest in Comparison to ASLQ Scores

Variables	p-value	Statistic	Remarks
Gender	0.165	2779	Not Significant
Experience	0.225	2353	Not Significant
Year Level	0.766	0.512	Not Significant
Age	0.481	0.831	Not Significant
GWA	0.647	0.632	Not Significant

Based on Table 7, the p-value reveals that there is no association and significant difference between self-leadership in gender, leadership experience, year level, age, and academic performance because p-values generated through the t-tests for gender and leadership experience and ANOVA for



year level, age, and academic performance through their General Weighted Average (GWA) resulted in a p-value higher than .05. Altman and Krzywinsky (2015) elaborated that correlation implies association but does not imply causation.

DISCUSSION

Task motivation is one of the domains of self-leadership on which intrinsic motivation is utilized by the individual to successfully complete a task which often manifests through the enjoyment and enthusiasm of an individual in the performance of a project (Krampitz et al., 2023). Locke and Latham (2019) highlighted in their findings that goals can affect performance and have an energizing function where higher, more ambitious goals lead to greater effort and persistence, which account for greater satisfaction compared to menial goals, which require less effort and persistence. The result of the study coincides with the work of Napiersky and Woods (2016), where, along with proper goal-setting and self-reward at the end of successful completion of a task, individuals are enabled to consistently stay focused and motivated in getting things done. Jovanevic and Matejevic (2014) highlighted the importance of the creation of learning environments and opportunities that promote the individual interests of students daily through meaningful tasks and activities to build up their motivation.

Constructive cognition involves the creation and control of thought processes crucial to the formation of mental imagery containing the successful accomplishment of tasks (Nnaemeka et al., 2020). Constructive cognition using mental imagery is explained as the human capacity to use imagination in making sense of scenarios that allows people to plan, rehearse, and re-analyze actions about events that involve an individual (Pearson and Kosslyn, 2013). High levels of positive self-talk in relation to constructive cognition have been observed to enhance self-confidence, academic achievement, and athletic performance (Feeney, 2022; Bulbul and Aykol, 2020; Lofti et al., 2020; Sanchez et al., 2016). This result of the study agrees with the research work conducted by Thomaes et al. (2019), in which students in the study who have exhibited positive self-talk and self-goal setting have been known to exert effort to achieve high academic performance. Also, the results coincide with the study of Durnali (2020) regarding high scores in self-leadership, particularly the utilization of mental imagery, visualization, and imagination concerning goal setting and self-framing in doing a successful task.

The result of the data agrees with the study conducted by Herdem (2019) in terms of ASLQ levels and GWA scores, which implied that academic achievement does not differ by levels of self-leadership because, as reflected in the table, the scores of the various GWA groups generally fall into the same description and interpretation. In terms of ASLQ scores to grade levels, the results of the data coincide with Matahela and Van Rensburg's (2022) study, which stressed in their study that self-leadership characteristics and skills attributed to its constructs are gradually attained and adopted as individuals academically progress. Furthermore, the result of the data coincides with the work of Ay, Karakaya, and Yilmaz (2015), where the levels of the 'respondents' self-leadership are particularly high regardless of academic levels and degrees. However, Kunagornpitak et al. (2019), in contrast, argued that old age and vast experience had been seen as contributing factors to high levels of self-leadership. However, such data has only been previously observed in university students and professionals, not



in high school students. Concerning gender and ASLQ scores, the data obtained from the research coincided with the study conducted by Herdem (2019), which stated that the perception of self-leadership among males is lower than that of females. Furthermore, Larsson and Alvinus (2020) backed up the data result by explaining that females appraised themselves highly in self-rated leadership behaviors compared to males in mixed-gender environments. Nientied and Toska (2021) also indicated that females score significantly higher than males in self-leadership tests.

The scores in the ASLQ concerning leadership experience backed up the research done by Nientied and Toska (2021), which explained that the responsibility of having or not having a leadership role does not have much bearing on the creation and execution of leadership strategies and leadership behaviors. The result of the study also confirmed the rejection of the notion that leadership roles are reserved only for the elite and that everyone, including those who have little or no leadership roles or experience, has the potential to lead themselves (Shek et al., 2015).

Under association and significant difference between self-leadership and academic performance among students at Philippine Science High School – SOCKSARGEN Region Campus, the result of the study disagrees with the study conducted by Kunagornpittak et al. (2019), which stipulated that there is an association between gender and self-leadership. Similarly, the result of the study disagrees with the work of Griffiths et al. (2019), according to which women leaders possess both agentic leadership traits or attributes pertaining to self-assertion and communal leadership traits or qualities regarding an overall concern for the general welfare of many.

The gender gap in terms of leadership is slowly dissipating, but nevertheless, we must not shun the fact that it persists (Badura et al., 2017). Nevertheless, it must be noted that the study results were obtained from high school students, while the former asobtained from samples composed of teachers from Thailand and the United States and from an adult Australian population. In terms of leadership experience and its association with self-leadership, the result obtained from the study disagrees with the notion that there is a positive relationship between self-leadership traits of leaders, as explained by the study conducted by Crossen (2015). Interestingly, leadership experience or lack thereof has no association with self-leadership because, throughout 'people's lives, people have learned and applied leadership behaviors, whether in a classroom or the workplace (Grimand and Pellerin, 2018). The result of the study regarding the significant difference and association between age, leadership experience, and self-leadership disagrees with the study conducted by Deng et al. (2019), which explained that the accumulation of leadership experiences and psychological and behavioral knowledge related to the expression of leadership from 'people's adolescence had a significant contribution to a 'leader's self-efficacy in leadership. The work disagrees with the results and findings of Maya and Uzman (2019), who described the association between self-leadership, self-efficacy, and the coping process and continuity of pursuit and progress on an academic degree.

Lastly, concerning academic performance and self-leadership, the data has shown that it disagrees with the study conducted by Lim et al. (2013), which described the association between self-leadership and self-efficacy, which contributes to a 'person's performance. Furthermore, the body of work also disagrees with the output of Baxter (2016), who stated that there is an association and



significant difference between the identification of academic performance towards career performance via self-leadership.

Conclusion

Self-leadership among the students at Philippine Science High School—SOCCSKSARGEN Region Campus (PSHS—SRC) has been shown to be relatively high. Consequently, levels of self-leadership in terms of gender are higher in female populations than in male populations, not just in university students and professionals but also in high school students. Furthermore, the study has explored that self-leadership is particularly prevalent among high school students, particularly in the realm of task motivation, positive rewards, and constructive cognition, and that self-talk is more reflective of self-leadership than other indices. Interestingly, high levels of usage of mental imagery and constructive cognition are well associated with spatial intelligence and aptitude in mathematics.

Also, self-leadership scores do not differ in terms of grade levels, academic performance, and leadership experience, which remain consistent as they progress and are practiced regardless of 'one's position or lack of a leadership position and role. Finally, associations and significant differences between self-leadership and academic performance, gender, age, and grade level have not been established, even though various kinds of literature and research have offered the contrary.

Recommendation

In terms of levels of self-leadership among high school students, it would be interesting to explore more whether the results would be emulated if they were measured in another locale—whether they would be conducted on other Philippine Science High School campuses or in public or private high schools. Secondly, programs and activities that would provide platforms for highlighting 'students' self-leadership should be initiated and assessed in terms of their impact on fostering the development of 'scholars' self-leadership. Furthermore, other factors deemed to have an association with self-leadership, such as degree of involvement in social organizations, internal motivation, and level of self-discipline, among others, were not tackled in the research and are worth exploring academically. Lastly, other dimensions as to why female self-leadership scores are higher than male self-leadership scores need further examination, such as whether decision-making, internal motivation, and gender roles are factors or indicators that have an association with self-leadership.

Conflict of Interest

The author declares that there are no conflicts of interest in the publication of this paper.

Acknowledgment

I would like to thank the present and past campus directors of Philippine Science High School—SOCCSKSARGEN Region Campus (PSHS—SRC)—Edman H. Gallamaso, Chuchi P. Garganera, and Arlyn P. Dacanay for making this research possible. I would also like to thank the present and previous Curriculum and Instruction Division chiefs of PSHS-SRC, Paul Randy P. Gumanao, Liza-Fe D. Gallamaso, and Rose-Ann S. Cabungcal. Also, thank you to the members of the management



committee of PSHS-SRC, Zaldy P. Baguios and Marjun C. Torres, and fellow members of the faculty, Jade F. Bamba, Jonathan A. Madronero, Jeffery M. Bagasbas, Beulah G. Villaruel, and Rudyrick L. Tabalon. Finally, thank you to the past and present scholars of the PSHS-SRC for their participation and inspiration in the creation of this research.

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