

Investigating academic achievement in high school: an in-depth examination of top performing students

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ABSTRACT

This research aimed to identify the key qualities of high-achieving students to motivate and guide those not meeting their potential to adopt successful strategies and improve their academic results. Through the use of qualitative research methods and purposeful sampling, ten second-year college students from Laguna State Polytechnic University-San Pablo City Campus were selected for this study. Analysis of common themes identified ten key factors that contribute to academic success. These include developing strong reading habits, actively engaging in classroom instruction, effective time management, organized study materials, regular review of learned content, utilizing technology for learning enhancement, a supportive school environment, inspirational role models, and a strong support system involving parents and teachers. All individuals involved in a child's education must understand and promote these attributes to optimize their learning experience, leading to tangible achievements in their academic performance. However, since this case study was conducted at a single school, it is not representative of all schools nationwide and cannot be generalized to the entire population. However, as it was conducted in a real-life setting, it is reasonable to draw pedagogical implications from these findings, as they offer insights into the characteristics of high-performing students.

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1. INTRODUCTION

The primary objective of the kindergarten to 12th grade (K-12) program is to improve student's academic achievements and expand their access to new college opportunities [1]. Furthermore, it aims to address the country's educational system challenges and elevate the competitiveness of the Philippines' basic education on a global scale [2]. According to Abragan *et al.* [3] the K-12 education system, encompassing kindergarten through grade 12, is tailored to enhance foundational skills, nurture competent members of society, and equip students with the essential knowledge and abilities to excel in higher education. Senior high school academic achievement is crucial in shaping one's future success. Numerous studies have shown a direct correlation between high school performance and future educational accomplishments, career

opportunities, creativity, and income levels. Individuals who excel in high school often exhibit remarkable creativity and are more inclined to pursue advanced degrees, attain leadership roles, and command higher salaries [4]. Moreover, research indicates a clear connection between high school success and future leadership positions. Nevertheless, not all students can maximize their potential. Some may opt not to prioritize academics, while others may lack the necessary support from their parents and teachers.

These individuals, known as “underachievers”, demonstrate a gap between their potential and academic achievements [5]. On the other hand, “high achievers” are characterized by a strong work ethic, diligent study habits, and consistently impressive academic performance. Razali *et al.* [6] suggest that educational settings often house both high achievers and underachievers. Schools must play a pivotal role in supporting the academic success of underachieving students, especially in today’s rapidly changing world where employability skills are in constant flux. High academic performance not only provides individuals with a competitive advantage in a dynamic job market but also equips them with the ability to quickly grasp new concepts and unlearn outdated information, crucial skills for navigating the uncertainties of the 21st century [7]. This adaptability is a key characteristic of high achievers. By discerning the qualities of prosperous students, we can inspire underperformers to mirror these behaviors and ultimately reach their academic apex. While the specific routines of top achievers may differ, certain shared traits likely play a role in their academic triumph. These attributes could pertain to study techniques, learning settings, or active involvement in classroom lessons.

Despite some studies conducted investigating the relationship between high-performing students and academic success as an area that was seldom explored through an investigation of the habits and practices of high-achieving students. Thus, this research sought to illuminate the factors that contribute to consistent academic performance. This study endeavors to pinpoint these common traits that enable students to excel consistently in assessments. Through an exploration of the customs and strategies of high-achieving students, this research aims to shed light on the factors that contribute to steady academic success. Moreover, studying the typical behaviors of successful individuals can help fill current gaps in educational research. This acquired knowledge can then be leveraged by a range of parties, such as educators, guardians, school leaders, and students. By grasping the traits of accomplished learners, students across all performance levels can create tailored approaches to enhance their academic achievements.

The study is grounded in Albert Bandura’s social learning theory (SLT), which posits that underperformers can enhance their performance by observing, modeling, and imitating high performers’ behaviors, attitudes, and emotional responses [8], [9]. This study is informed by the principles of SLT, suggesting that low achievers can narrow the achievement gap by emulating the attributes of high achievers and practicing desirable behaviors.

2. METHOD

The study utilized a qualitative approach, employing semi-structured interviews as the primary method of data collection. Non-probability purposeful sampling was employed to recruit participants based on specific selection criteria. Before the interviews, participants signed a consent letter. Interview questions were developed based on existing literature in the field. Face-to-face interviews were conducted securely, with each session lasting approximately 30 minutes. Thematic analysis was then applied to the gathered data. To determine the sample for the study, the following criteria were utilized:

- The student must have demonstrated academic excellence during their senior high school years.
- The student must be a dean’s lister (high performers/achievers) in the previous school year i.e., first year college (academic year 2023-2024).
- The student must be an incoming second-year college student for the academic year 2024-2025 enrolled at Laguna State Polytechnic University-San Pablo City Campus.

The sample size (n) for the study was determined based on recommendations from existing literature. For instance, Collins *et al.* [10] recommended a minimum of 3-5 participants for qualitative case studies. To achieve data saturation, this study included a total of 10 participants. Interview guide was validated to ensure the clarity of the interview questions, leading to minor adjustments being made to remove any ambiguity. To ensure adherence to ethical standards, a consent letter was provided to the selected participant. The letter outlined the extent of their participation and guaranteed confidentiality and privacy regarding their personal information. After the conduct of the interview, their responses were transcribed and coded.

Pseudonyms were employed to safeguard the anonymity of participants. The interviews’ transcripts were examined for codes and themes, and the analysis procedures were based on a modified version of methodologies developed by Stevick [11], Colaizzi [12], and Keen [13] as outlined by Moustakas [14]. Transcendental phenomenology was selected as the most suitable methodology for this study due to the aim of comprehending the meaning of participants’ experiences. Moreover, the systemic procedures and meticulous data analysis steps advocated by Moustakas [14] are beneficial for novice researchers.

The transcendental approach incorporating systemic procedures aligns with the philosophical perspective of incorporating both objective and subjective approaches to knowledge, along with rigorous data analysis procedures. The interview transcripts were provided to the participants for member checking to ensure accuracy. Direct quotations from the participants were also included to enhance validity. Ethical considerations were upheld by obtaining informed consent from all research participants and maintaining their anonymity using participant codes (e.g., P1, P2) instead of their original names.

3. RESULTS AND DISCUSSION

After conducting a thematic analysis, it was discovered that high achievers credited their success to ten key areas of support. These areas were categorized into two main groups: proximate and remote support. The study identified five areas of remote support, which included parents, teachers, peers, role models, and school environment. In contrast, the study found five themes under proximate support, such as developing a reading habit, maintaining study notes, active participation in the classroom, effective time management, and proficiency in information and communication technology (ICT) skills. To provide guidance and clarity, the discussion will start with proximate support and then move on to remote support.

3.1. Remote support

Parent support: P4 expressed, *“Having parents who are university teachers has provided me with a unique level of support and understanding during my academic endeavors. Their constant encouragement and moral support have motivated me to strive for excellence in my studies.”* Additionally, P1 agrees with the sentiment expressed regarding parental financial support: *“Both of her educated and supportive parents prioritize her education by allowing ample time for self-study, ensuring her well-being, meeting her financial needs, and providing access to mobile and ICT resources within their household.”*

Our study suggests that the data from the interviews indicated that parents play a significant role in shaping their children's academic lives. This parental influence encompasses various forms of support, such as encouragement, moral guidance, financial assistance, emotional backing, and spiritual encouragement. Research suggests that children's academic success is heavily influenced by the level of parental involvement and guidance in their studies [15]. Parental monitoring and advice are crucial factors in determining a child's dedication to learning and motivation to excel. Studies have shown that students' performance is more significantly impacted by parental guidance than by teachers' efforts [5].

Teacher support: P2 expressed, *“Gratitude for the support received from their subject teachers, highlighting the abundance of advice and correction of mistakes. They emphasized that positive feedback from their teachers motivates them to strive harder.”* P9 praised: *“The various ways in which their subject teachers support them, particularly through setting benchmarks for each subject.”*

It was revealed that students benefit greatly from having supportive teachers who provide guidance, positive reinforcement, timely feedback, and a balance of firmness and approachability. A study by Kiefer *et al.* [16] determined that teacher support plays a significant role in influencing students' motivation levels and confidence in completing daily school tasks. Similarly, research by Guéguen *et al.* [17] revealed that verbal encouragement from teachers has a positive impact on students' academic success. The authors also noted a correlation between positive student-teacher relationships and academic achievement.

Peer support: P5 highlighted, *“The importance of having sincere and good friends in aiding academic learning. They mentioned that their friends assist them in being punctual, engaging in intellectual conversations, and choosing key topics for revision.”* On the other hand, P7 emphasized, *“The significant contribution of friends in their learning process through group discussions, doubt clarification, and error correction. This collaborative effort helps them gain a better understanding of their limitations and areas for improvement.”*

It can be inferred that high achievers tend to gravitate towards companions who are authentic, and ambitious, and bring out the best in each other. Students need to prioritize spending time with positive and hardworking friends, rather than negative and easy-going friends. According to a study by Conley *et al.* [18] the time students spend studying can be influenced by their friends, ultimately impacting academic achievement. Additionally, Golsteyn *et al.* [19] suggest that students who surround themselves with persistent peers early on in their academic journey may develop better study habits and form a social network that leads to academic success.

School environment: P3 emphasized, *“The importance of a conducive working environment in the learning process. Access to science labs and ICT resources at school significantly improved their learning experience, which they attribute to academic success.”* Conversely, P6 also highlighted: *“The significance of a good working environment for learning. They mentioned that quiet classrooms aid in concentration during lessons, while a safe and inclusive environment promotes comfort and security in studying.”*

It was demonstrated that an enabling work atmosphere, exemplified by a well-equipped ICT lab, a safe and inclusive learning environment, and a pristine school environment, fosters a conducive environment for learning [20]. It is important to note that the atmosphere within the classroom and throughout the school plays a significant role in shaping the mood and learning experience of students [21]. Creating a conducive environment in and around the school has a direct impact on the student's academic performance. Research has shown that students perform better when studying or taking exams in a quiet and peaceful setting, as opposed to a noisy and disruptive one [5], [22].

Role model: P5 expressed that, *"Their parent serves as their role model, providing necessary support and guidance during difficult times. The parent's invaluable advice on facing challenges and persevering serves as a source of inspiration."* P2 shared that: *"They admire a teacher, parents, and friends as their role models. The teacher's motivational speeches, parents' emphasis on academic focus, and friends' competitive nature all contribute to the participant's drive to excel in their studies."*

It can be inferred from the data indicated that respondents regard seniors, parents, teachers, and friends as their role models. According to a recent systematic literature review by Gladstone and Cimpian [23], the introduction of role models to students has the potential to enhance motivation and foster inclusivity in the classroom. Additionally, individual achievement goals and intrinsic motivation are key predictors of learning strategies and academic success [24].

3.2. Proximate support

Reading habit: P4 noted, *"I read for approximately 20 to 30 minutes every day. If I come across unfamiliar words or phrases, I utilize the internet to research and expand my vocabulary and understanding."* Additionally, P9 shared, *"Reading is a passion of mine. I typically spend around 2 hours daily immersed in books, which helps me stay informed and enhance my knowledge. I prefer reading non-textbook materials, as I find textbooks to be dull and lacking in interest."*

This study revealed that individuals who excel academically dedicate between 30 minutes to 3 hours each day to reading books. This finding is aligned with Jiaping *et al.* [25] who posited that reading is crucial for every student as it plays a vital role in the learning process. Developing a habit of reading is essential for becoming a lifelong learner. It not only enhances academic performance but also broadens readers' understanding of the world and its wisdom.

Maintaining study notes: P1 mentioned that, *"They neatly keep their notes, which helps them easily comprehend the information and encourages further learning."* Similarly, P10 agreed with this sentiment, stating that: *"Taking succinct notes and referring to them during exams saves time and helps maintain focus."*

It was determined from the study that individuals who excel academically tend to keep well-organized and brief notes to assist them in preparing for exams. Studies have indicated that taking effective notes can result in enhanced performance during exams. It was demonstrated that a group that focused on note-taking outperformed a group that simply read the material. Furthermore, summarizing the content of the text was linked to better performance in tasks compared to those who wrote notes in the order of the text or verbatim. Rummer *et al.* [26] highlighted the benefits of organized and concise note-taking practices in enhancing academic outcomes.

Active class participation: P7 emphasized, *"The importance of actively participating in class discussions and seeking clarification through asking questions."* Likewise, P8 shared a similar sentiment, stating that: *"Their success is attributed to attentiveness in class and active participation in discussions by sharing thoughts and attentively listening to peers and the teacher."*

It was revealed from the study that high-achieving students exhibit a strong focus during classroom instruction and possess great attentiveness. This finding was affirmed by Al'Omairi and Al Balushi [27] who concluded that engaging in class discussions has a positive impact on students' academic performance by enhancing comprehension and recall abilities. Additionally, they noted that cultivating attentiveness in class helps students develop automaticity, enabling them to sustain focus for extended periods.

Time management: P2 explained, *"That they carefully allocate time among subjects, following a study timetable consistently. If deviations occur, they compensate by sacrificing leisure time the next day."* P3 noted that: *"He created a study schedule based on their strengths and weaknesses in each subject, prioritizing more challenging topics."*

It can be inferred that high achievers excel in time management and know the importance of having a firm study routine. As noted, this strategic time management directly impacts short-term and long-term learning progress [28], influencing academic performance. Research has shown that effective time management is a common trait among high achievers [29]. ICT skills: P6 shared that, *"I watch YouTube and videos at home to review lessons from class, which aids in clarifying the concepts. Additionally, they utilize internet browsing to delve deeper into the subject matter."*

This study has also found that high achievers demonstrate proficiency in ICT skills and utilize them

to enhance their understanding of concepts. Pagani *et al.* [30] show a correlation between ICT skills and academic success in Italy. Kim [31] discovered that while the results of utilizing ICT may vary in enhancing academic outcomes, a review of current literature demonstrates a consistent trend of positive correlation with academic achievements. Table 1 displays the recurring responses of the participants regarding the investigating academic achievement: an in-depth examination of top performing students in specific areas of interest. These areas include: i) remote support (parents, teachers, peers, role models, and school environment and ii) proximate support (reading habits, maintaining study notes, active class participation, time management, and ICT skills).

Table 1. Summary table of the emerging themes

Variable	Emerging themes	Recurrent statements
Remote support	Parents, teachers, peers, role models, and school environment	<ul style="list-style-type: none"> - <i>"Having parents who are university teachers has provided me with a unique level of support and understanding during my academic endeavors. Their constant encouragement and moral support have motivated me to strive for excellence in my studies."</i> - <i>"Gratitude for the support received from their subject teachers, highlighting the abundance of advice and correction of mistakes. They emphasized that positive feedback from their teachers serves as a motivation to strive harder."</i> - <i>"The importance of having sincere and good friends in aiding academic learning. They mentioned that their friends assist them in being punctual, engaging in intellectual conversations, and the significance of a good working environment for learning. They mentioned that quiet classrooms aid in concentration during lessons, while a safe and inclusive environment promotes comfort and security in studying and choosing key topics for revision."</i> - <i>"Their parent serves as their role model, providing necessary support and guidance during difficult times. The parent's invaluable advice on facing challenges and persevering serves as a source of inspiration."</i>
Proximate support	Reading habits, maintaining study notes, active class participation, time management, and ICT skills	<ul style="list-style-type: none"> - <i>"I read for approximately 20 to 30 minutes every day. If I come across unfamiliar words or phrases, I utilize the internet to research and expand my vocabulary and understanding."</i> - <i>"Taking succinct notes and referring to them during exams saves time and helps maintain focus."</i> - <i>"Their success is attributed to attentiveness in class and active participation in discussions by sharing thoughts and attentively listening to peers and the teacher."</i> - <i>"He creates a study schedule based on their strengths and weaknesses in each subject, prioritizing more challenging topics."</i> - <i>"I watch YouTube videos at home to review lessons from class, which aids in clarifying the concepts. Additionally, they utilize internet browsing to delve deeper into the subject matter."</i>

4. CONCLUSION

Our findings provide conclusive evidence that high performers in academics are influenced by two main types of factors. It was found out that remote support from sources such as parents, teachers, peers, role models, and the school environment has a positive impact on student learning. Similarly, proximate support from habits like reading, maintaining study notes, active class participation, time management, and ICT skills played a significant role in the daily engagement of high achievers, resulting in better exam performance. Thus, this study has strongly revealed the importance of understanding that a student's high performance can be influenced by external attributes like the school environment, teacher support, family support, peer group, and role models. Both remote and proximate support systems need to coexist harmoniously within a school system for students to achieve high performance.

This serves as a clear indication and reminder for all stakeholders to be aware of the key attributes that impact a student's academic success. The result of this study highlighted that all individuals involved in a child's education must understand and promote these attributes to optimize their learning experience, leading to tangible achievements in their academic performance. It is important to note that the 10 support ecosystems outlined in this discussion are not exhaustive and exclusive to achieving high performance at the university level. These supports were identified based on findings from a single campus of Laguna State Polytechnic University, indicating that there may be additional attributes not covered in this analysis. Future research could investigate the use of a larger and more diverse sample of participants, as well as the implementation of a mixed methods approach to determine if the qualitative feedback aligns with the quantitative data. Since this case study was conducted at a single school, it is not representative of all high

schools nationwide and cannot be generalized to the entire population. However, as it was conducted in a real-life setting, it is reasonable to draw pedagogical implications from these findings, as they offer insights into the characteristics of high-performing students.

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AUTHOR CONTRIBUTIONS STATEMENT

This journal uses the Contributor Roles Taxonomy (CRediT) to recognize individual author contributions, reduce authorship disputes, and facilitate collaboration.

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C : Conceptualization

I : Investigation

Vi : Visualization

M : Methodology

R : Resources

Su : Supervision

So : Software

D : Data Curation

P : Project administration

Va : Validation

O : Writing - Original Draft

Fu : Funding acquisition

Fo : Formal analysis

E : Writing - Review & Editing

CONFLICT OF INTEREST STATEMENT

The authors declare that there are no conflicts of interest related to this study. This means that there were no financial, personal, or professional relationships that could have influenced the research outcomes.

DATA AVAILABILITY

The data is available upon request. Thus, access can be granted after a formal request to the authors subject to the institutional guidelines of Laguna State Polytechnic University.

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