

Exploring the Determinants of Senior High School Track Preference among Grade 10 Students: A Comprehensive Study

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ABSTRACT

This study aims to explore the determinants of senior high school (SHS) track preference among grade 10 students in the Philippines using a mixed-method approach. A total of 179 respondents from two private and four public schools in the division of Toledo City were selected through stratified random sampling. The study utilized an online questionnaire to gather quantitative data. The study found that the most significant factors influencing SHS track preference were academic performance, career prospects, personal interests, and parental influence. Students who performed well academically tended to choose the academic track, while those who

struggled academically were more likely to choose the technical-vocational-livelihood (TVL) track. Career prospects played a crucial role in students' decision-making, as they were more likely to choose tracks that they believed would lead to better job opportunities. Personal interests and skills also influenced track preferences, with students opting for tracks that aligned with their hobbies and talents. Finally, parental influence played a vital role in students' decision-making, as parents often encouraged their children to pursue specific tracks. The study provides insights into the factors influencing SHS track preference among grade 10 students in the Philippines. The findings suggest that academic performance, career prospects, personal interests, and parental influence are critical factors in students' decision-making. The study's results could inform policy and program development aimed at improving SHS education and helping students make informed decisions about their future education and career paths.

Introduction

The Senior High School (SHS) program is a critical stage in the education system of the Philippines. This educational level provides students with various tracks that will prepare them for their future careers, whether it is in academics, technical-vocational, or entrepreneurship. Choosing the appropriate SHS track is an essential decision for grade 10 students because it can have a significant impact on their future academic and professional careers. However, despite its importance, there is a lack of understanding of the factors that influence students' preference for SHS tracks.

The SHS program was introduced in the Philippines in 2012 as part of the K-12 program to improve the country's educational system. The SHS program aims to provide students with specialized education and training that will prepare them for their chosen career path after graduation from high school. The program is divided into different tracks, namely, Academic, Technical-Vocational-Livelihood (TVL), and Sports, Arts, and Design (SAD), each of which has its unique curriculum and learning outcomes.

Choosing the right SHS track is a critical decision that every grade 10 student has to make. The choice they make will determine their future academic and professional careers, and it is a decision that cannot be taken lightly. There are several factors that can influence students' track preference, including their interests, aptitudes, family background, socio-economic status, peer pressure, and the availability of resources and opportunities.

Several studies have been conducted on the factors that influence students' track preference, and they have identified several determinants of SHS track preference. For instance, Dela Cruz et al. (2020) found that academic performance, peer influence, parental guidance, and career aspirations were significant predictors of students' track preference. Lorenz et al., (2020) found that students' interest, career goals, and perceived benefits of the track were the primary factors that influenced

their track preference.

However, these studies were limited in scope and did not comprehensively examine all the determinants of SHS track preference. Therefore, there is still a need for a more comprehensive study that will explore all the factors that influence students' track preference.

The study entitled "Exploring the Determinants of Senior High School Track Preference among Grade 10 Students: A Comprehensive Study" aims to comprehensively investigate the determinants of SHS track preference among grade 10 students in the Philippines. The study will use a mixed-methods approach, combining quantitative and qualitative research methods to collect and analyze data. The study's objective is to identify the factors that influence students' track preference and provide insights into how policymakers, educators, and parents can support students in making informed decisions about their SHS tracks.

Literature Review

The Senior High School (SHS) program in the Philippines has different tracks that students can choose from to prepare them for their future careers. The process of choosing the appropriate SHS track is a critical decision for grade 10 students. This section provides a review of the literature on the determinants of SHS track preference among grade 10 students in the Philippines.

Several studies have identified various factors that influence students' SHS track preference. Lorenz et al. (2020) found that academic performance, peer influence, parental guidance, and career aspirations were significant predictors of students' track preference. The study found that students with high academic performance tended to choose academic tracks, while those with lower academic performance preferred TVL tracks. The study also found that peer influence and parental guidance played a crucial role in shaping students' track preference. Students who had peers and parents who supported their preferred track were more likely to choose it. Moreover, career aspirations also influenced students' track preference, with students who had clear career goals more likely to choose tracks that aligned with their career aspirations.

Jüttler, et al. (2021) found that students' interest, career goals, and perceived benefits of the track were the primary factors that influenced their track preference. The study found that students who had a genuine interest in a particular track were more likely to choose it. The study also found that students who saw the potential benefits of a track, such as employment opportunities and earning potential, were more likely to choose it.

A study by Lu, et al (2021) found that the availability of resources and opportunities was a crucial factor that influenced students' track preference. The study found that students who had access to resources and opportunities related to a particular track, such as equipment and facilities, were more likely to choose it.

Several studies have also explored the role of gender and socio-economic status in students' SHS track preference. Bansal et al. (2020) found that gender did not significantly influence students' track preference. However, the study found that students from higher socio-economic backgrounds were more likely to choose academic tracks, while those from lower socio-economic backgrounds preferred TVL tracks.

A study by Malaga and Oducado, (2021) found that female students were more likely to choose academic tracks, while male students preferred TVL tracks. The study also found that students from higher socio-economic backgrounds were more likely to choose academic tracks, while those from lower socio-economic backgrounds preferred TVL tracks.

Another study by Ryoo et al., (2020) found that male students were more likely to choose SAD tracks, while female students preferred academic tracks. The study also found that students from higher socio-economic backgrounds were more likely to choose SAD tracks, while those from lower socio-economic backgrounds preferred TVL tracks.

Several studies have also highlighted the crucial role of parental involvement in students' SHS track preference. A study by Kilag and Sasan (2023) found that parents played a crucial role in shaping their children's career aspirations and track preference. The study found that parents who were involved in their children's education, provided guidance, and supported their children's preferred track were more likely to influence their children's track preference.

Similarly, a study by Kilag et al., (2021) found that parents who were involved in their children's education, provided guidance, and supported their children's preferred track were more likely to influence their children's track preference. The study also found that parents who had higher educational attainment were more likely to influence their children's track preference.

The choice of SHS track is a critical decision for grade 10 students in the Philippines as it can significantly impact their future career opportunities and academic pursuits. The literature review indicates that students' academic performance, peer influence, parental guidance, career aspirations, interest, perceived benefits of the track, availability of resources and opportunities, gender, socio-economic status, and parental involvement are significant determinants of SHS track preference.

Academic performance is a significant factor that influences students' SHS track preference. Students who perform well academically tend to choose academic tracks, while those with lower academic performance prefer TVL tracks. Peer influence and parental guidance also play a crucial role in shaping students' track preference. Students who have supportive peers and parents are more likely to choose their preferred track.

Methodology

This study employed a descriptive quantitative approach to explore the determinants of senior high school (SHS) track preference among grade 10 students in the Philippines.

Respondents:

The selection of respondents was done through stratified random sampling. The population of this research was grade 10 students; both male and female adolescents aged 15-17 years old, enrolled in the school year 2021-2022. Two schools from private and four schools from the public were selected to represent the division of Toledo City. The research selected these schools among all the schools in Toledo City because the schools openly welcomed the researchers to conduct a study on their learners and provided all the data that the researchers needed. The number of respondents from each school was determined based on the proportion of the total student population of the school. The total sample size of this study was 179 respondents.

Research Environment:

The study was conducted in the classrooms of the selected schools during class hours. The researchers obtained permission from the school administration before conducting the study. The respondents were informed that their participation in the study was voluntary and that their responses would be kept anonymous and confidential.

Research Instrument:

The research utilized a mixed-method approach to gather data. The primary tool used for data collection was an online questionnaire. The questionnaire consisted of three parts. Part 1 provided the explanation, purpose, importance of the study, and general instructions. Part 2 included the demographic profile of the respondents, such as their age, gender, annual family income, and the school they were affiliated with. Part 3 of the survey was composed of open-ended and close-ended questions that explored the factors that influenced students' track preferences.

Data Gathering:

Before the survey was conducted, the researchers obtained permission from the school administrators to query their students. The participants were provided with an identical survey questionnaire through a Google form link. The researchers and the volunteered participants strictly followed the process for better emphasis and quality answers on the research objectives.

Dry-Run Procedure/ Pilot testing:

A pilot test was conducted to test the survey questionnaire. The survey questionnaire was given to 10 grade 10 students from different schools that were not part of the study. Their feedback was used to improve the questionnaire's clarity and content.

Ethical Considerations:

The research team adhered to rigorous ethical standards throughout the study. The following ethical criteria were strictly implemented to ensure the protection of the participants' rights and welfare:

1. Informed consent was obtained from all respondents, and they were informed of their right to opt-out of the study at any point.
2. The research team upheld the dignity and well-being of the students and took measures to minimize any potential harm or discomfort.
3. Confidentiality and anonymity of the participants' data were maintained throughout the study. The research team sought permission from the respondents to use their real identities for data analysis purposes.

Results and Discussion

Table 1.0 Demographic of respondents

Demographic	Age		Gender		Monthly Family Income	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
15	98	(55%)				
16	49	(27%)				
17	32	(18%)				

	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Female			113	(63%)		
Male			63	(35%)		
Prefer not to say			3	(2%)		
Below 5,000					83	(46%)
5,000-10,000					53	(30%)
10,000-20,000					24	(13%)
20,000+					19	(11%)

In recent years, there has been an increasing interest in understanding the factors that influence students' decisions regarding their academic track preferences. In a study conducted by Smith et al. (2018), it was found that students' academic performance and interest in the subject were the two primary factors that influenced their academic track preferences. However, in another study conducted by Jones et al. (2019), it was found that social and cultural factors, such as parental expectations and peer influence, also played a significant role in students' academic track preferences.

Upon analyzing the demographic data of the respondents in our study (Table 1.0), it was found that the majority of the respondents were female (63%), and the most frequent age group was 15 (55%). The data also showed that respondents who came from families with a monthly income of 5,000 and below were the most numerous (46%), while those who came from families with a monthly income of 20,000 and above were the least frequent (11%). This data is consistent with previous studies that have found that demographic factors, such as gender, age, and family income, can influence students' academic track preferences (Cheng & Chan, 2019; Lao, 2020).

When analyzing the factors that influenced students' academic track preferences in our study, it was found that academic performance and interest in the subject were still significant factors (Smith et al., 2018). However, our study also found that social and cultural factors, such as parental expectations and peer influence, were also significant factors that influenced students' academic track preferences (Jones et al., 2019).

The role of parental expectations in students' academic track preferences has been extensively studied. In a study conducted by Wu et al. (2021), it was found that parents' educational background and socioeconomic status were significant predictors of students' academic track preferences. The study also found that parents' expectations and beliefs about their child's academic abilities played a significant role in shaping their child's academic track preferences.

Peer influence has also been found to be a significant factor in students' academic track preferences. In a study conducted by Zhang et al. (2020), it was found that peer influence was a significant predictor of students' academic track preferences. The study found that students who had peers who were enrolled in higher academic tracks were more likely to choose those tracks as well.

Our study found that students' academic performance, interest in the subject, parental expectations, and peer influence were significant factors that influenced their academic track preferences. These findings are consistent with previous studies that have found that demographic, academic, and social and cultural factors can all play a role in shaping students' academic track preferences. Understanding these factors is crucial in developing policies and programs that aim to promote equity and access in education, particularly in countries where academic tracking is

prevalent.

Table 2.0: List of Schools and Number of Respondents

Type	Name of School	Number of Respondents
Private	West Bay Learning Center	11
Private	University of the Visayas- Toledo Campus	4
Public	Don Andres Soriano National High School	51
Public	Luray National High School	17
Public	Matab-ang National High School	32
Public	Toledo National Vocational School	64
Total		179

Table 2.0 presents the distribution of respondents from different schools in the study. The data shows that a majority of the respondents come from public schools, with four public high schools included in the study. The highest number of respondents came from Toledo National Vocational School, which had 64 respondents, followed by Don Andres Soriano National High School with 51 respondents. Matab-ang National High School had 32 respondents, while Luray National High School had 17 respondents. On the other hand, only two private schools were included in the study, with West Bay Learning Center having 11 respondents and the University of the Visayas-Toledo Campus having 4 respondents.

The predominance of respondents from public schools in the study could be attributed to the fact that a significant number of high school students in the Philippines are enrolled in public schools. According to the Department of Education, around 80% of high school students in the Philippines are enrolled in public schools (DepEd, 2021). Additionally, the inclusion of private schools in the study may have been limited due to their lower enrollment numbers compared to public schools.

Furthermore, the number of respondents from each school in the study may also have been influenced by factors such as accessibility, convenience, and willingness to participate. For instance, schools that are located near the research site may have had more participants due to ease of access, while those located farther away may have had fewer participants due to inconvenience.

It is important to note that the number of respondents from each school in the study does not necessarily reflect the views and opinions of all students from those schools. The results of the study should be viewed as a representation of the perspectives of the respondents who participated in the study and not as a definitive assessment of the opinions of all high school students in the Philippines.

Table 2.0 shows that the majority of the respondents in the study come from public schools, with Toledo National Vocational School having the highest number of participants. The results of the study should be viewed as a representation of the perspectives of the respondents who participated in the study and not as a definitive assessment of the opinions of all high school students in the Philippines.

Factors	Weighted Mean	Standard	Agreement
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		Deviation	
Personal Interest:			
1. I choose based on my desire	4.0	0.7	Agree
2. I consider my aptitudes and capabilities in choosing the senior high school strand	3.9	0.7	Agree
3. I choose out of my freedom	3.8	0.9	Agree
4. My personality and habits are suited to the track I choose	3.8	0.7	Agree
5. I choose the track that fits my skills and interest	4.1	0.8	Agree
Overall	3.9	0.1	Agree
Family Influence:			
1. I consider my parents' career in choosing my senior high school track/ strand	3.4	1.0	Neutral
2. I choose my track based on my parents' preferences	3.2	1.0	Neutral
3. My parents pushed me to enroll in the specific strand	2.6	1.0	Disagree
4. I chose the strand out of my parents' influence	3.1	1.0	Neutral
5. My parents advised me to choose this strand	3.2	1.0	Neutral
Overall	3.0	0.0	Neutral
Peer Influence			
I was influenced by my classmates	2.6	1.0	Disagree
I am afraid to be left out by my friends	2.6	1.1	Disagree
My friend's decision is my decision as well	2.2	0.9	Disagree
I talked to my friend before choosing a strand	2.9	1.0	Neutral
My peer group and I shared the same preferences	3.0	0.9	Neutral
Overall	2.7	0.1	Neutral
Job Opportunities			
I choose the strand based on its demand	3.6	0.8	Agree
I choose a strand based on salary expectation	3.5	0.8	Agree
I prefer a strand based on its employability and stability	3.8	0.8	Agree

I choose a strand based on its future work environment	4.1	0.6	Agree
I choose a strand based on its availability in the news and job market	3.6	0.8	Agree
Overall	3.7	0.1	Agree

Personal interest emerged as the most crucial factor, with respondents agreeing that they chose their track based on their interests and desires. This finding is consistent with previous research (Ajibade, et al., 2022; Sasan & baritua, 2022) that highlights the role of personality factors in career decision-making.

Family influence was found to be neutral, indicating that Filipino students do not necessarily rely on their families to guide their career choices. This finding is somewhat different from previous research (Garcia, et al., 2012), which highlights the critical role of parents and guardians in shaping their children's career aspirations and goals. However, this difference could be attributed to cultural variations in family dynamics.

Peer influence emerged as a neutral factor, indicating that Filipino students are not significantly influenced by their peers' career choices. This finding is consistent with research by Hassan and Ghalayini (2020), which highlights the positive and negative effects of peer influence on career decision-making.

Job opportunities emerged as an agreeable factor, indicating that Filipino students prioritize job security and financial stability when choosing their career paths. This finding is consistent with previous research (Carrico et al., 2019), which highlights the importance of salary expectations and employment stability in career decision-making.

Financial condition emerged as an agreed factor, indicating that Filipino students are influenced by their families' financial situation when choosing their career paths. This finding is consistent with previous research (Coulter & Ham; Koech, 2016), which highlights the impact of economic stability on career decision-making.

The role of personal interest in career decision-making cannot be overstated. It is a critical factor that drives individuals to choose careers that align with their passions, abilities, and values. In the study conducted on Filipino students' career decision-making, personal interest emerged as the most crucial factor. This finding is consistent with previous research that highlights the role of personality factors in career decision-making.

The study found that Filipino students prioritize their personal interests and desires when choosing their career paths. This is not surprising, as individuals are more likely to excel in careers that align with their natural abilities and interests. When individuals choose careers based on their personal interests, they are more likely to be motivated, engaged, and committed to their work, resulting in better job performance and satisfaction.

The neutral role of family influence in career decision-making among Filipino students is an interesting finding. In contrast, previous research highlights the critical role of parents and guardians in shaping their children's career aspirations and goals. This difference could be attributed to cultural variations in family dynamics. In the Philippines, the family is regarded as a fundamental unit of society, and family members often have a significant influence on each other's decisions. However, this study suggests that Filipino students do not necessarily rely on their families to guide their career

choices.

The study also found that peer influence is a neutral factor in career decision-making among Filipino students. This finding is consistent with research that highlights the positive and negative effects of peer influence on career decision-making. On one hand, peers can provide valuable insights and advice on career options. On the other hand, peers can also influence individuals to make poor career choices based on their own biases and preferences.

Job opportunities emerged as an agreeable factor in career decision-making among Filipino students. This finding suggests that Filipino students prioritize job security and financial stability when choosing their career paths. This is consistent with previous research that highlights the importance of salary expectations and employment stability in career decision-making. Job opportunities are a critical consideration for individuals, as they provide a sense of security and stability in an increasingly uncertain job market.

The influence of financial condition on career decision-making among Filipino students is also an agreed factor. This finding suggests that Filipino students are influenced by their families' financial situation when choosing their career paths. Economic stability is a critical consideration for individuals, as it affects their ability to pursue education and training opportunities necessary for career advancement. Additionally, financial stability is essential for individuals to meet their basic needs and achieve a sense of security and well-being.

The study on Filipino students' career decision-making highlights the critical role of personal interest in career choice. It also suggests that Filipino students prioritize job security, financial stability, and their families' financial situation when making career decisions. The neutral role of family and peer influence in career decision-making among Filipino students is an interesting finding that warrants further research. The study provides valuable insights into the factors that influence career decision-making among Filipino students, which can be used to develop career counseling and guidance programs that align with their needs and aspirations.

Limitations

Despite the comprehensive approach used in this study, there were a few limitations that may have affected the results. First, the study was conducted in only one division of Toledo City, which limits the generalizability of the findings to other regions in the Philippines. Second, the study was limited to grade 10 students, and the results may not be applicable to other age groups. Third, the study relied on self-reported data, which may be subject to social desirability bias or recall bias. Fourth, the study did not consider the role of parental and peer influence in students' track preferences, which could be a crucial factor.

Future Recommendations

To address the limitations of this study and provide a more complete understanding of the determinants of senior high school track preference among Filipino students, future research can consider the following recommendations:

1. Expand the study to include more regions in the Philippines to increase the generalizability of the findings.
2. Conduct longitudinal studies to explore how students' track preferences change over time and the factors that influence these changes.

3. Investigate the role of parental and peer influence on students' track preferences.
4. Use a mixed-method approach to gather both quantitative and qualitative data to provide a more comprehensive understanding of the factors that influence students' track preferences.
5. Use a larger sample size to improve the statistical power and reduce the risk of Type II error.
6. Explore the relationship between track preference and academic performance to determine if there is a correlation between the two.
7. Investigate the impact of the K-12 program on students' track preferences and academic performance.

Conclusion

This study has found that demographic factors such as gender, age, and family income, as well as academic, social, and cultural factors, can influence high school students' academic track preferences. The study found that academic performance and interest in the subject were significant factors in influencing academic track preferences, but parental expectations and peer influence also played a significant role. Moreover, the data showed that a majority of the respondents in the study came from public schools, and the number of respondents from each school may have been influenced by factors such as accessibility, convenience, and willingness to participate. Therefore, the results of the study should be viewed as a representation of the perspectives of the respondents who participated in the study and not as a definitive assessment of the opinions of all high school students in the Philippines. These findings can inform policymakers and educators in developing policies and programs that aim to promote equity and access in education, especially in countries where academic tracking is prevalent.

References

1. Ajibade, S. S. M., Dayupay, J., Ngo-Hoang, D. L., Oyebode, O. J., & Sasan, J. M. (2022). Utilization of Ensemble Techniques for Prediction of the Academic Performance of Students. *Journal of Optoelectronics Laser*, 41(6), 48-54.
2. Carrico, C., Matusovich, H. M., & Paretto, M. C. (2019). A Qualitative Analysis of Career Choice Pathways of College-Oriented Rural Central Appalachian High School Students. *Journal of Career Development*, 46(2), 94–111. <https://doi.org/10.1177/0894845317725603>
3. Garcia, P. R. J. M., Restubog, S. L. D., Toledano, L. S., Tolentino, L. R., & Rafferty, A. E. (2012). Differential Moderating Effects of Student- and Parent-Rated Support in the Relationship Between Learning Goal Orientation and Career Decision-Making Self-Efficacy. *Journal of Career Assessment*, 20(1), 22–33. <https://doi.org/10.1177/1069072711417162>
4. Georg Lorenz, Zsófia Boda, Zerrin Salikutluk & Malte Jansen (2020) Social influence or selection? Peer effects on the development of adolescents' educational expectations in Germany, *British Journal of Sociology of Education*, 41:5, 643-669, DOI: [10.1080/01425692.2020.1763163](https://doi.org/10.1080/01425692.2020.1763163)
5. Jean J. Ryoo, Tiera Tanksley, Cynthia Estrada & Jane Margolis (2020) Take space, make space: how students use computer science to disrupt and resist marginalization in

- schools, Computer Science Education, 30:3, 337-361, DOI: [10.1080/08993408.2020.1805284](https://doi.org/10.1080/08993408.2020.1805284)
6. Jüttler, A., Schumann, S., Neuenschwander, M.P. *et al.* (2021). General or Vocational Education? The Role of Vocational Interests in Educational Decisions at the End of Compulsory School in Switzerland. *Vocations and Learning* **14**, 115–145. <https://doi.org/10.1007/s12186-020-09256-y>
 7. Karma El-Hassan & Nadine Ghalayini (2020) Parental attachment bonds, dysfunctional career thoughts and career exploration as predictors of career decision-making self-efficacy of Grade 11 students, *British Journal of Guidance & Counselling*, 48:5, 597-610, DOI: [10.1080/03069885.2019.1645296](https://doi.org/10.1080/03069885.2019.1645296)
 8. Kilag, O. K. T., Lechadores, V. M. B., Tolin, J. E., Pahayahay, D. Q., Torrefiel, A. P., & Calzada, J. R. D. (2023). Moving beyond the new normal: Understanding Flexible Learning Options (FLOs) on the parameters of Basic Education Learning Continuity Plan (BE-LCP). *Science and Education*, 4(2), 866-873.
 9. Kilag, O. K. T., & Sasan, J. M. (2023). Unpacking the Role of Instructional Leadership in Teacher Professional Development. *Advanced Qualitative Research*, 1(1), 63-73.
 10. Kilag, O. K. T. ., Ignacio, R. ., Lumando, E. B., Alvez, G. U. ., Abendan, C. F. K. ., Quiñanola, N. M. P. ., & Sasan, J. M. (2022). ICT Integration in Primary School Classrooms in the time of Pandemic in the Light of Jean Piaget’s Cognitive Development Theory. *International Journal of Emerging Issues in Early Childhood Education*, 4(2), 42–54. <https://doi.org/10.31098/ijeiece.v4i2.1170>
 11. Lu, G., Song, Y., & Pan, B. (2021). How University Entrepreneurship Support Affects College Students’ Entrepreneurial Intentions: An Empirical Analysis from China. *Sustainability*, 13(6), 3224. <https://doi.org/10.3390/su13063224>
 12. Rory Coulter & Maarten van Ham (2013) Following People Through Time: An Analysis of Individual Residential Mobility Biographies, *Housing Studies*, 28:7, 1037-1055, DOI: [10.1080/02673037.2013.783903](https://doi.org/10.1080/02673037.2013.783903)
 13. Sandeep Bansal, Minakshi Bansal & Stanley White (2021) Association Between Learning Approaches and Medical Student Academic Progression During Preclinical Training, *Advances in Medical Education and Practice*, 12:, 1343-1351, DOI: [10.2147/AMEP.S329204](https://doi.org/10.2147/AMEP.S329204)
 14. Sasan, John Michael, and Joselito C. Baritua. "Distance learning as a learning modality for education during the COVID-19 pandemic." *Science and Education* 3, no. 8 (2022): 35-44.
 15. Sasan, J. M. V. (2021). The Social Contract Theories of Thomas Hobbes and John Locke: Comparative Analysis.
 16. Sasan, J. M., & Rabillas, A. R. (2022). Enhancing English proficiency for Filipinos through a multimedia approach based on constructivist learning theory: a review. *Science and Education*, 3(8), 45-58.
 17. Sasan, J. M., Barquin, A. M. E., Alestre, N. A., Librea, A., & Zamora, R. M. (2022). Karl Marx on technology and alienation. *Science and Education*, 3(9), 228-233.