

Gender Differences in Co-Curricular Involvement and Academic Performance

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ABSTRACT

This research study, was conducted at Bohol Island State University- Bilar Campus, it investigated gender differences in co-curricular involvement and academic performance among third and fourth-year college students. The study used a descriptive research design. The findings revealed that there was no significant difference between gender and co-curricular involvement, suggesting that all students, regardless of gender identity, have equal opportunities to participate in such activities. However, there was a significant difference in academic performance between genders, with female students outperforming their other genders. These indicated that gender played a significant role in academic outcomes at BISU-Bilar. The study concluded that while gender does not influence participation in co-curricular activities, it played a significant role in academic performance at the university. The researchers recommended that the school promote inclusive co-curricular activities that cater to the diverse gender identities within the school community and encourage students to participate in co-curricular activities while maintaining a balance with their academic performance.

Keywords: Academic performance; Co-curricular activities and involvement; Gender; Gender differences; Gender identity

INTRODUCTION

Education plays a vital role in shaping and fostering the knowledge and skills of the student. It is a process of developing the capacities and potentials of the individual to be successful in their chosen field.

The differences in performance for students of all genders have been the topic of much discussion and research. Students' academic performance allows educational and vocational institutions to determine whether the educational curriculum is having the desired impact on students in terms of teaching and learning. It gives some indication of how well teachers and students have accomplished their targeted educational goals (Arshad, Zaidi & Mahmood, 2015). Acknowledging and accommodating gender differences in co-curricular activities also can create more inclusive and enriching experiences for their students, fostering personal growth, skill development, and a sense of belonging for everyone involved. The exploration of gender differences in academic performance and co-curricular involvement is essential for understanding the disparities that exist within educational settings.

The researchers wanted to find out if there were differences among gender in academic performance and co-curricular involvement. Specifically, this study sought to answer the following questions: (1). what is the gender profile of students in terms of: female; male; lesbian; gay; bisexual; transgendered; queer; and intersex?; (2). what is the co-curricular involvement of the students among gender?; (3). what is the degree of involvement of co-curricular activities among gender?; (4). what is the academic performance of students among gender?; (5). is there a significant difference among gender and degree of involvement of co-curricular activities?; (6). is there a significant difference among gender and academic performance?; (7). is there a significant relationship between the degree of involvement of co-curricular activities and academic performance?

This research study was anchored on the **Gender Schema Theory by Bem** (1983) that aimed to provide an understanding of how mental representations of gender develop in early childhood to influence attention, motivation, person perception, impression formation and behavior. It is defined as how children adjust their behaviors to align with the norms of their culture and categorical processing throughout their lifetime (Cherry, 2017). In the study by Parajuli, M., & Thapa, A. (2017) entitled 'Gender Differences in Academic Performance of Students', gender plays a significant role in the academic performance of students. Workman and Heyder (2020) argue that females excel in language, arts, and even the natural sciences, despite the latter traditionally being dominated by males. Additionally, Alice H. Eagly first developed **Social Role Theory** in the 1980s. Social role theory is a theory in social psychology that frames the differences between men and women as the result of the combined impact of social and biological influences. In relation to co-curricular involvement, **Mihaly Csikszentmihalyi introduced Flow Theory** in the 1970s examining people who did activities for pleasure, even when they were not rewarded with money or fame. The theory considered artists, writers, athletes, chess masters, and surgeons – individuals who were involved in activities they preferred. It is called state flow where people illustrate their intense experiences using the metaphor of being carried by a current like a river flows.

Pursuant to Section 3 of the Education Act of 1982, the state shall promote the rights of every individual relevant to quality education, regardless of sex, age, creed, socio-economic status, physical and mental condition, racial or ethnic origin, political or other affiliation. It aimed to penalize the acts of discrimination and promotes inclusivity and equal participation in the area of co-curricular involvement in schools. It acted to ensure that students have equal opportunities to engage in co-curricular activities, regardless of their race, ethnicity, religion, gender, disability, or any other protected characteristic. Allowed all students to explore their interests, develop their talents, and contribute to the school community without fear of discrimination regardless of their gender. It also encourages schools to create an environment that fosters diversity, respect, and equal opportunities for all students in their co-curricular involvement.

In the Philippines, studies like “Just Let Us Be” conducted by Human Right Watch in June, 2017 had reported discrimination among LGBT students. The findings of the study include school experiences of bullying, discrimination, lack of access to LGBT-related information and physical or sexual assault. According to the study of Oliviera (2017) that there were positive relationships between ‘outness’ and student involvement. Lapa (2015) showed that men tend to be more physically active than women, and recent studies show that male students, especially, spend a lot of time in sports and social activities. Female students tend to outperform their male counterparts. Workman and Heyder (2020) argue that females excel in language, arts, and even the natural sciences, despite the latter traditionally being dominated by males. On the other hand, Goni, Yaganawali, Ali & Bularafa (2015) state that among college-going students, no significant gender difference in academic performance was observed. Same with the study of Sakyi-Hagan N. and Hanson, R. (2022) that there was no difference in science achievement between male and female pre-service science students, an allegation that appears to be consistent with the findings of certain researchers (Akabayashi, Nozaki, Yukawa & Li (2020), who showed that gender differences are rapidly fading within educational systems.

Moreover, co-curricular activities enable students to supplement their learning through experiences that make them more competitive candidates for employment (Miller et al., 2018). Co-curricular activities promote students' communication skills, which have a positive impact on their academic achievements (Venugopal, 2016). Additionally, Singh (2017) asserts that co-curricular activities enable students to interact positively with others, display better gestures, and skillfully express non-verbal communication such as conveying messages and emotions, maintaining eye contact, and other social interactions.

METHODOLOGY

Research Design

The study used a descriptive research design. The researchers aimed to determine the gender difference in co-curricular involvement and academic performance of Third and Fourth Year college students in Bohol Island State University -Bilar Campus.

Research Locale

The study was conducted at Bohol Island State University -Bilar Campus in Zamora, Bilar, Bohol, Philippines. The participants in the study were drawn from the five colleges within the university namely: The College of Teacher Education (CTE), the College of Agriculture and Sciences (CoAS), the College of Technology and Allied Science (CTAS), the College of Forestry and Environmental Science (CFES), and the College of Business and Management (CBM).

Research Participants

The respondents of the study were Third and Fourth Year College students who were officially enrolled in the School Year 2024-2025 and were chosen by the researcher through purposive sampling. A sample of 80 respondents was drawn from the population of 1,618 third to fourth year students in BISU-Bilar. The researcher samples were lesser than the accurate sample size because the researchers need to find a respondent that would willingly answer the questionnaire.

Research Instrument

The researchers used a modified assessment tool from the study of Khan, S. A., Tabassum, R. & Muhammad, N. (2023) entitled “A Survey of Secondary School Students in Lahore, Pakistan on the Relationship Between Co-Curricular Activities and Personality Development”, a tool used to assess the difference in degree of involvement in co-curricular activities among genders with a 5-point Likert scale applied during the data collection process. The researchers conducted a pilot-test from the random second year students in BISU-Bilar and conduct the study to the selected Third and Fourth year students. The measuring of data encompasses; (1). gender profile of the respondents; (2). co-curricular involvement; and (3). degree of involvement of co-curricular activities.

Data Gathering Procedure

To begin the data collection procedure, the researchers asked permission from the Campus Director and the Dean of the College of Education of Bohol Island State University- Bilar Campus to pilot test and conduct the study inside the campus and to distribute the questionnaires personally to the respondents. After receiving the approval letter, another letter was sent to the registrar's office to request the population of all third and fourth year students. The researchers conducted a pilot testing to the random second year students of Bohol Island State University-Bilar Campus. Using purposive sampling, students who are officially enrolled at BISU-Bilar Campus were selected as respondents for the study. A total of 80 individuals were chosen at random among the students. The distribution of questionnaires and the administration of the instrument were carried out by the researchers themselves. The trust in the confidentiality of the data was greatly appreciated.

Ethical Considerations

Ethical considerations involved evaluating the impact of actions on individuals, communities, and society, ensuring fairness, respect, and responsibility while minimizing harm and promoting well-being.

RESULTS AND DISCUSSION

Figure 1 presented the gender profile of 80 respondents, comprising students from the third and fourth year of BISU-Bilar.

Out of the total respondents, 17 (21.25%) were male, 42 (52.50%) were female, 5 (6.25%) identified as lesbian, 6 (7.5%) as gay, 7 (8.75%) as bisexual, and 3 (3.75%) as queer. This data indicated a higher proportion of female respondents compared to other gender identities.

Figure 1. Gender Profile of the Respondents

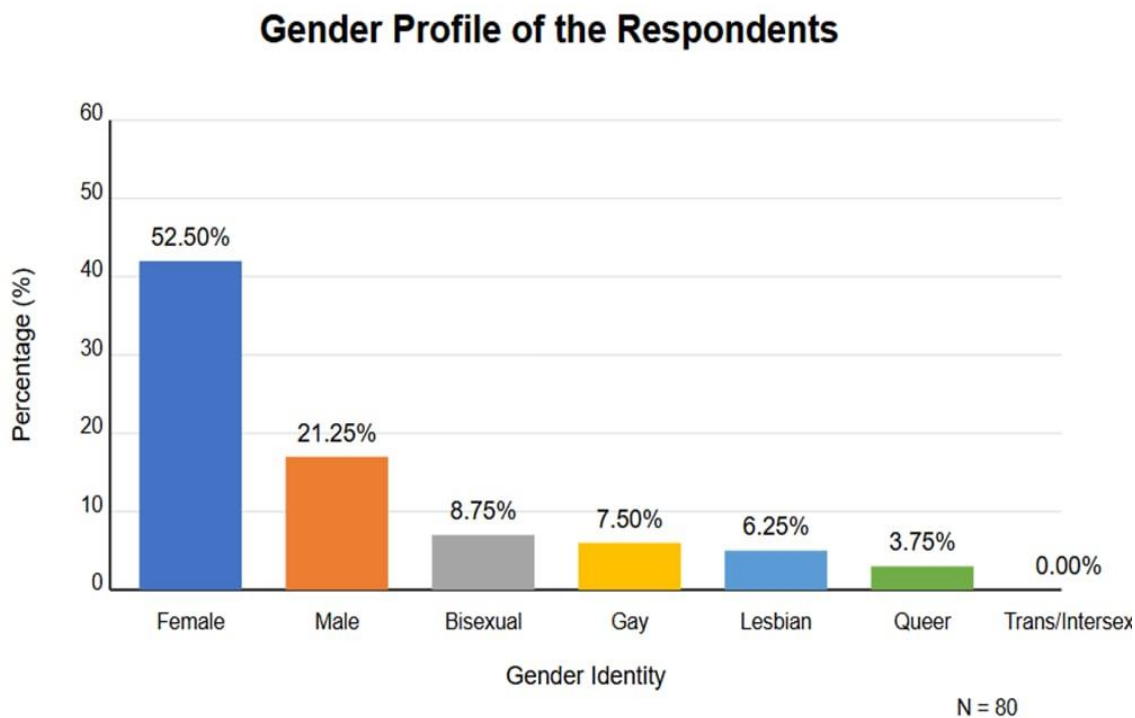


Figure 2 presented the co-curricular involvement of the 80 respondents, revealing varying levels of involvement across different gender identities. Participation in sports ranged from a high of 100% among queer respondents to a low of 2.38% among females. In contrast, involvement in academic organizations was uniformly high (100%) across all gender identities. Participation in non-academic organizations varied, with the highest rate observed among lesbians (100%) and the lowest among females (50%). As highlighted by Bag et al. (2021), co-curricular activities were equally as important as curricular activities in the education process, and students of all levels should demonstrate a positive attitude towards co-curricular activities.

Figure 2. Co-curricular Involvement of the Students

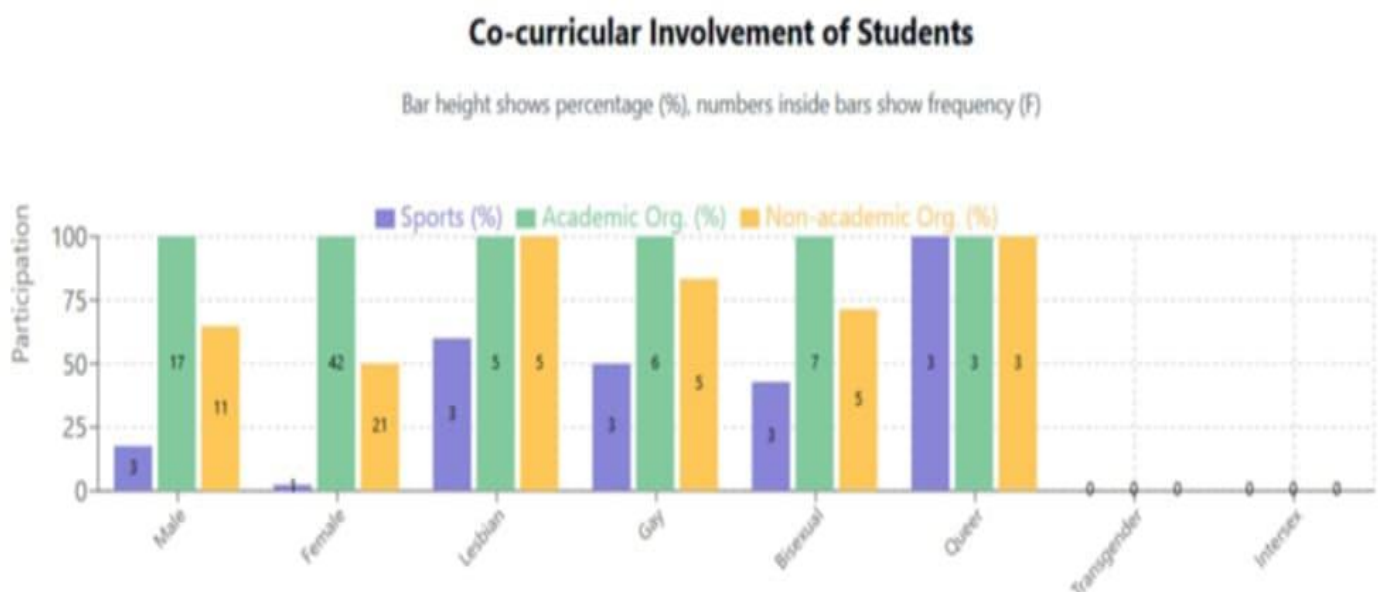
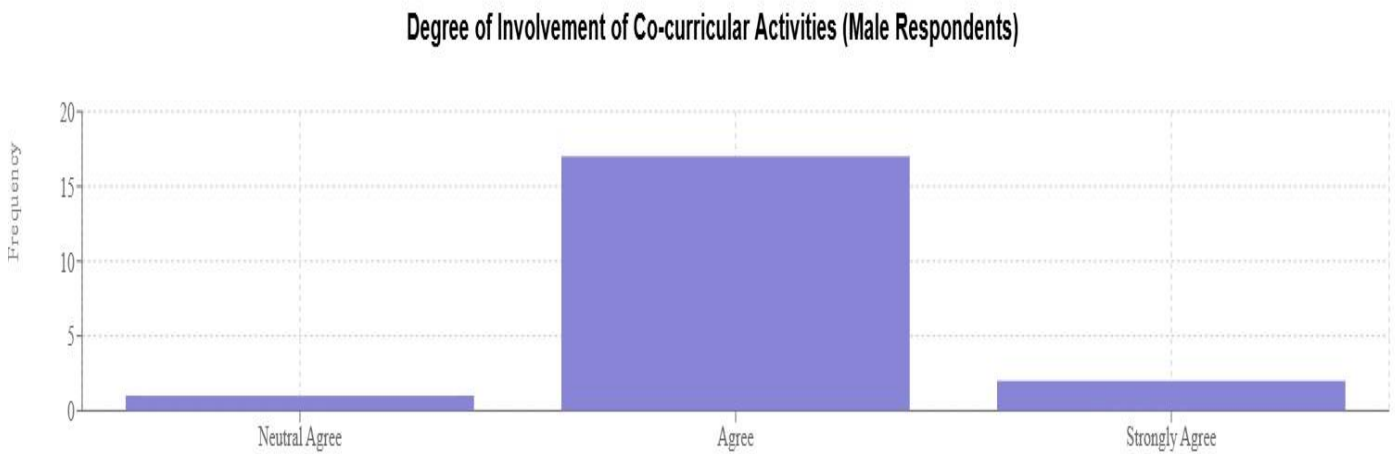


Figure 3 revealed the degree of involvement of co-curricular activities of the respondents. Male strongly believe in the positive impact of sports on physical health, teamwork, and collaboration skills but they are not perceived to be more inclined towards sports participation compared to others.

Figure 3. Degree of Involvement of Co-curricular Activities (Male Respondents)



This study was aligned from the research of Martínez, M., & Collaborators (2020), that boys were more likely to engaged in sports, while girls preferred cognitive or artistic activities, such as music and painting.

Figure 3. Degree of Involvement of Co-curricular Activities (Female Respondents)

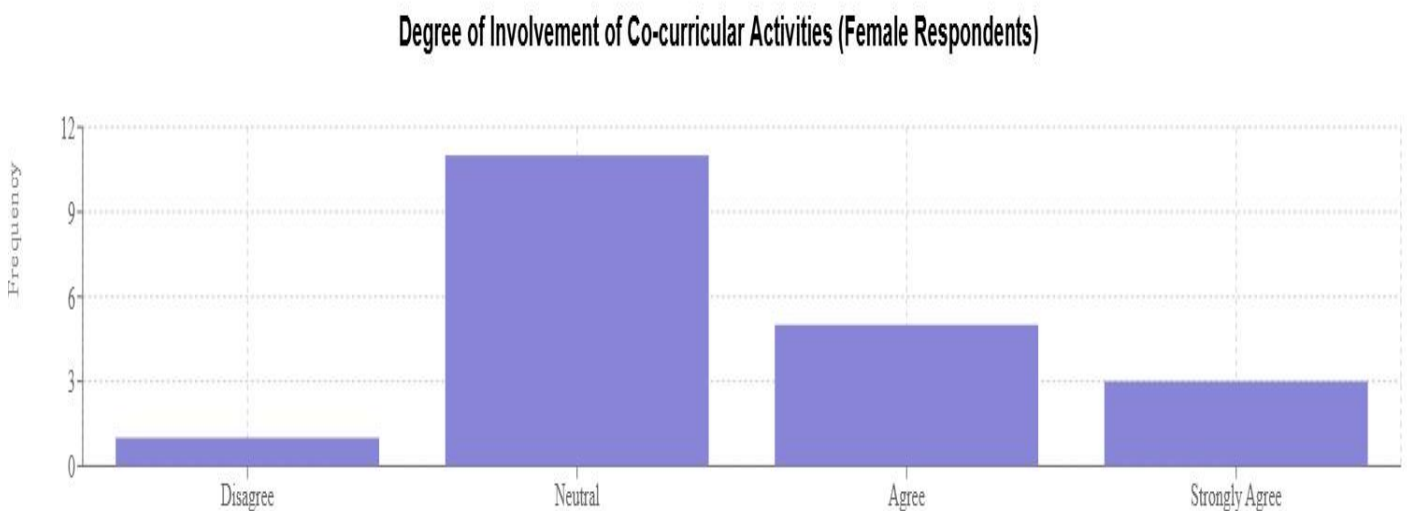


Table 3. Degree of Involvement of Co-curricular Activities (Female Respondents)

Figure 3 presented the involvement among females and they agreed that sports enhances students' teamwork and collaboration skills, help students build confidence and stage presence and social skills as well as interactions. However, the data also reveals that they have a lower level of team activities such as football, tennis, basketball etc.

Figure 3 described that lesbian expressed a high level of agreement with statements regarding the positive impact of these activities on students' physical health and teamwork. While they were not perceived to be more inclined towards musical involvement, equal access to resources and support.

Figure 3. Degree of Involvement of Co-curricular Activities (Lesbians' Respondents)

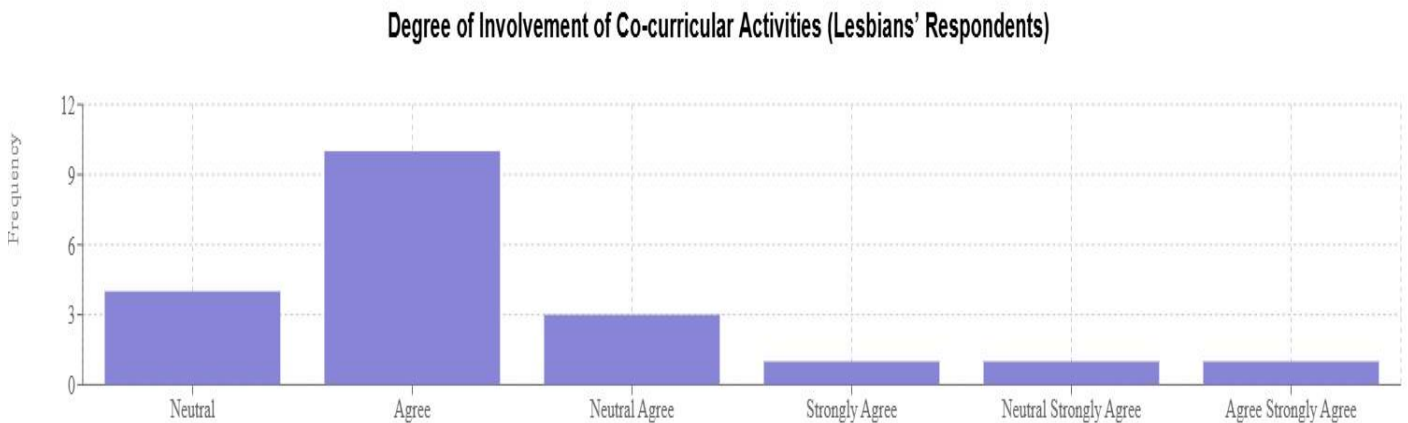


Figure 3 revealed the gay respondents and they strongly believed in the benefits of co-curricular activities like teamwork and instilling discipline and perseverance, social skills and interaction. But their responses suggested a less clear perception of their own involvement in sports and leadership positions and musical involvement.

Figure 3. Degree of Involvement of Co-curricular Activities (Gay Respondents)

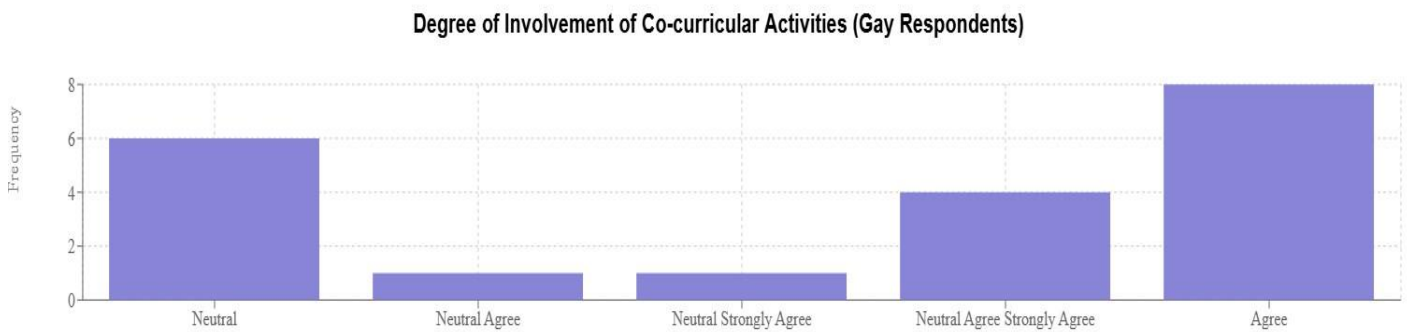


Figure 3 described bisexual responses and they strongly agree to explore different interests and engaged in activities that contributed to personal development while they were not perceived to be more inclined towards team activities such as football, tennis, basketball etc.. They also felt highly encouraged to participate and have access to resources and support while they are not perceived to be more inclined towards sports participation compared to others, they are also not likely to hold leadership positions within co-curricular activities.

Table 3. Degree of Involvement of Co-curricular Activities (Bisexual Respondents)

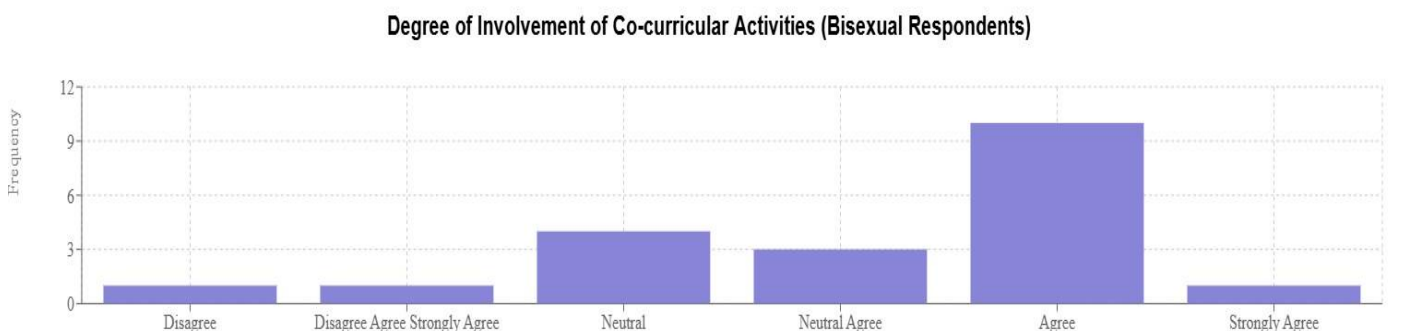


Figure 3 revealed that queer respondents feeling less inclined towards sports participation despite recognizing its benefits. Additionally, sports participation builds self-esteem and school belonging, connecting to bisexual and queer respondents' recognition of the developmental benefits of activities despite their lower sports involvement based on the study" Gendered Fields: Sports and Advanced Course Taking in High School

Figure 3. Degree of Involvement of Co-curricular Activities (Queer Respondents)

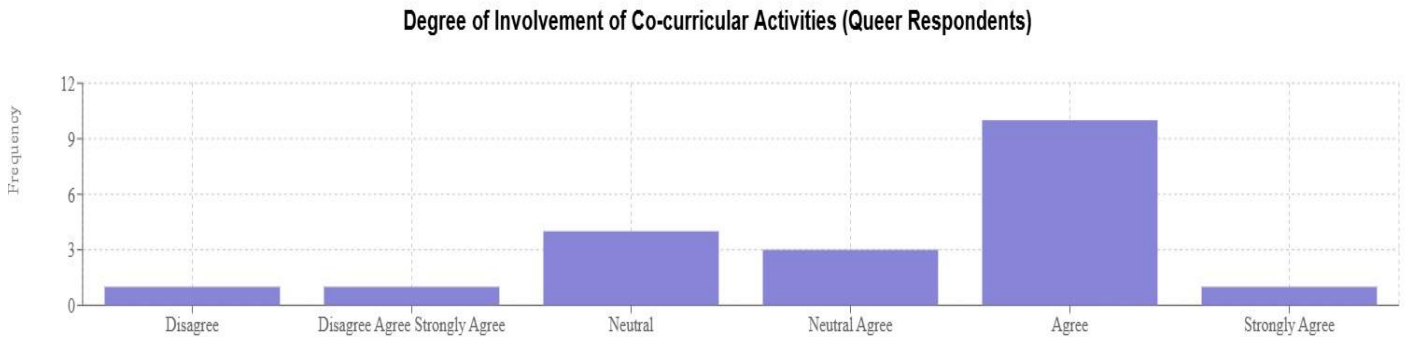


Table 1 presented the academic performance of the 80 respondents. Referring to the student manual, the researchers categorized the grades into "very good" (1.3-1.5 GPA) and "good" (1.6-2.5 GPA). Among the 17 males, 11.76% achieved "very good" and 88.24% achieved "good." In contrast, 38.10% of the 42 females achieved "very good," while 61.90% achieved "good." All 5 lesbian respondents achieved "good," as did all 6 gay respondents. Among the 7 bisexual respondents, 14.29% achieved "very good" and 85.71% achieved "good." Finally, all 3 queer respondents achieved "good."

Table 1. Academic Performance of the Students

| Gender | Grades | Frequency | Percentage (%) |
|----------|--------------|-----------|----------------|
| Male | Excellent | 0 | 0 |
| | Very Good | 2 | 11.76 |
| | Good | 15 | 88.24 |
| | Fair | 0 | 0.00 |
| | Total | 17 | 100.00 |
| Female | Excellent | 0 | 0.00 |
| | Very Good | 16 | 38.10 |
| | Good | 26 | 61.90 |
| | Fair | 0 | 0.00 |
| | Total | 42 | 100.00 |
| Lesbian | Excellent | 0 | 0.00 |
| | Very Good | 0 | 0.00 |
| | Good | 5 | 100.00 |
| | Fair | 0 | 0.00 |
| | Total | 5 | 100.00 |
| Gay | Excellent | 0 | 0.00 |
| | Very Good | 0 | 0.00 |
| | Good | 6 | 100 |
| | Fair | 0 | 0.00 |
| | Total | 6 | 100.00 |
| Bisexual | Excellent | 0 | 0.00 |
| | Very Good | 1 | 14.29 |
| | Good | 6 | 85.71 |
| | Fair | 0 | 0.00 |
| | Total | 7 | 100.00 |

| | | | |
|-------------|--------------|----------|---------------|
| Transgender | Excellent | 0 | 0.00 |
| | Very Good | 0 | 0.00 |
| | Good | 0 | 0.00 |
| | Fair | 0 | 0.00 |
| | Total | 0 | 0.00 |
| Queer | Excellent | 0 | 0.00 |
| | Very Good | 0 | 0.00 |
| | Good | 3 | 100.00 |
| | Fair | 0 | 0.00 |
| | Total | 3 | 100.00 |
| Intersex | Excellent | 0 | 0.00 |
| | Very Good | 0 | 0.00 |
| | Good | 0 | 0.00 |
| | Fair | 0 | 0.00 |
| | Total | 0 | 0.00 |

The findings aligned with the research of Ullah and Ullah (2019), who found that females tend to outperform other gender in educational performance, not only at the school and college levels but also in higher education. It argues that this performance was influenced by various factors, including social expectations, different learning styles and the greater academic focus and discipline often observe among females. Conversely, lesbians were found to perform less well academically compared to female due to their experiences with marginalization and challenges in accessing educational opportunities.

Table 2 presented the difference between gender and degree of involvement of co-curricular activities among students. The data showed no significant difference between co-curricular participation and gender of the students in BISU-Bilar. The table showed that the P-value of 0.695 was higher than the significance level of 0.05 ($p > 0.05$). This revealed that there is no statistically significant relationship between gender and participation in co-curricular activities at BISU-Bilar. This finding suggests that students of all genders at BISU-Bilar have equal opportunities to engage in co-curricular activities.

Table 2. Difference between Gender and Degree of Involvement of Co-curricular Activities

| Source of Variation | df | F | P-value | Decision | Interpretation |
|---------------------|----|-------|---------|----------------------------------|-----------------|
| Between Groups | 5 | 0.607 | 0.695 | Failed to Reject Null Hypothesis | Not Significant |
| Within Groups | 74 | | | | |
| Total | 79 | | | | |

The findings indicated a strong positive attitude among students towards co-curricular activities, suggesting their awareness of the benefits these activities offer. Notably, the study found no significant influence of gender or location of residence on students' attitudes towards co-curricular activities.

Table 3 showed the difference in gender and academic performance of the students. The data revealed a significant difference between gender and academic performance of the students in BISU-Bilar. The table showed that the P-value of 0.025 was less than the significance level of 0.05 ($p < 0.05$). Therefore, the null hypothesis was rejected. This finding indicates a relationship between gender and academic performance at school.

The finding was supported by the study of Tsaousis and Alghamdi (2022), females scored significantly higher than males in the verbal and GPA domains, with the difference attributed to distinct factors: cardiorespiratory fitness for females and test anxiety for males. The findings suggested that understanding the relationship between academic performance, physical fitness, and test anxiety can help educators develop effective intervention programs. These programs could include activities like organized sports and workshops on healthy lifestyles to improve students' physical fitness and reduce test anxiety, ultimately leading to better academic outcomes.

Table 3. Difference between Gender and Academic Performance

| Source of Variation | df | F | P-value | Decision | Interpretation |
|---------------------|----|-------|---------|------------------------|----------------|
| Between Groups | 5 | 2.740 | 0.025 | Reject Null Hypothesis | Significant |
| Within Groups | 74 | | | | |
| Total | 79 | | | | |

In Table 4, the analysis focused on the relationship between degree of involvement of co-curricular activities and academic performance among students. The computed correlation coefficient of -0.081 indicated a very weak negative correlation between these variables. The computed t-value of -0.715, with 78 degrees of freedom and a tabulated t-value of ± 1.97 at $\alpha=0.05$, falls within the non-significant range. Therefore, the null hypothesis, stating no significant relationship between academic performance and co-curricular participation, was accepted. Singhs (2017) supported that there was no statistically significant relationship found between degree of involvement of co-curricular activities and academic performance. Co-curricular activities complement academic activities and emphasized that it did not hinder academic performance but rather facilitated knowledge acquisition and foster a competitive spirit, ultimately contributing to student success.

Table 4. Relationship between Degree of Involvement of Co-curricular Activities and Academic Performance

| Variable | Computed r | Computed t | Degrees of freedom | Tabulated t $\alpha = 0.05$ ± 1.97 | Null Hypothesis | Interpretation |
|---|------------|------------|--------------------|--|------------------|-----------------|
| Academic Performance Involvement of Activities | -0.081 | -0.715 | 78 | | Failed to Reject | Not Significant |

CONCLUSION

The researchers concluded that, queer individuals exhibited the highest level of participation in co-curricular activities compared to other genders. Females were less involved in co-curricular activities than the other gender. The gender did not influenced the degree of involvement of co-curricular activities, it implied that it had equal opportunities to engage in such activities. There was no significant difference between gender and degree of involvement of co-curricular activities, implying that co-curricular activities did not negatively impacted academic achievement. This implied that gender played a role in academic outcomes in BISU-Bilar.

Contributions of Authors

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Conflict of Interests

The authors declared of no conflict of interest.

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REFERENCES

1. Acharya, A. K., Kumar, R., Pradhan, P., & Subhrajyoti, T. (2023). The interest of undergraduate students in co-curricular activities in relation to their leadership skills. *American Journal of Education and Technology (AJET)*, 2(1). <https://journals.e-pali.com/home/index.php/ajet>
2. Adigun, J., Onihunwa, J., Irunokhai, E., Sada, Y., & Adesina, O. (2015). Effect of gender on students' academic performance in computer studies in secondary schools in New Bussa, Borgu Local Government of Niger State. *Journal of Education and Practice*, 6(33), 1–7.
3. Akabayashi, H., Nozaki, K., Yukawa, S., & Li, W. (2020). Gender differences in educational outcomes and the effect of family background: A comparative perspective from East Asia. *Chinese Journal of Sociology*, 6(2), 315–335.
4. Armah, S. E., Akayuure, P., & Armah, R. B. (2021). A comparative study of male and female distance learners' mathematics achievement. *Contemporary Mathematics Science Education*, 2(1), ep21001. <https://doi.org/10.30935/conmaths/9288>
5. Arshad, M., Zaidi, S. M. I. H., & Mahmood, K. (2015). Self-esteem and academic performance among university students. *Journal of Education and Practice*, 6(1), 156–162.
6. Bag, K., Gayen, P., Alam, S. S., & Gorain, S. C. (2021). The attitude of university students towards co-curricular activity: A comparative study. *International Journal of Advance Research, Ideas and Innovations in Technology*, 7(1), 223. <https://www.ijariit.com>
7. Bekomson, A. N., Amalu, M. N., Mgban, A. N., & Abang, K. B. (2020). Interest in extracurricular activities and self-efficacy of senior secondary school students in Cross River State, Nigeria. *International Education Studies*, 79–87.
8. Cherry, K. (2017, November 4). What is gender schema theory? Verywell Mind. Retrieved February 27, 2018, from <https://www.verywellmind.com/what-is-gender-schema-theory-2795205>
9. Chudgar, A. A., Chandra, M., Iyengar, R., & Shanker, R. (2015). The school resources and student achievement: Data from rural India. *Prospects*, 45(4), 515–531.
10. Crosnoe, R. (2010). Gendered fields: Sports and advanced course taking in high school. *Sociology of Education*, 83(3), 248–268. <https://pmc.ncbi.nlm.nih.gov/articles/PMC2835346/>
11. Dean, K. L. (2015). Understanding student success by measuring co-curricular learning. *New Directions for Institutional Research*, 2014(164), 27–38.
12. Dodke, S., Dubey, S., & Sattur, K. (2022). Impact of co-curricular activities on academic performance and personality development of college students. *Journal of Emerging Technologies and Innovative Research (JETIR)*, 9(9), 670–682.
13. Fox, L. M., & Sease, J. M. (2019). Impact of co-curricular involvement on the academic success of pharmacy students. *Currents in Pharmacy Teaching and Learning*, 11(5), 461–468.
14. Ghani, S. A., Awang, M. M., Ajit, G., & Rani, M. A. M. (2020). Participation in co-curricular activities and students' leadership skills. *Journal of Southwest Jiaotong University*, 55(4), 1–13. <https://www.gyanunlimited.com/education/co-curricular-activities-meaning-definition-examples-importance-benefits/2437/>
15. GLSEN Research Institute. (2021). LGBTQ students and school sports participation: Research brief. Retrieved from <https://www.glsen.org/research/lgbtq-students-and-school-sports-participation>
16. Goni, U., Yaganawali, S. B., Ali, H. K., & Bularafa, M. W. (2015). Gender differences in students' academic performance in Borno State, Nigeria: Implications for counseling. *Journal of Education and Practice*, 6(32), 107–114. <https://www.iiste.org>
17. Grant, V., Brown, B., Swaney, G., Hollist, D., Harris, K. J., Noonan, C. W., & Gaskill, S. (2015). Community-identified strategies to increase physical activity during elementary school recess on an American Indian reservation: A pilot study. *Preventive Medicine Reports*, 2, 658–663.
18. Kovac, M. M., & Sirkovic, N. (2017). Attitudes towards communication skills among engineering students. *English Language Teaching*, 10(3), 111–118.
19. Lapa, T. Y. (2015). Physical activity levels and psychological well-being: A case study of university students. *Procedia - Social and Behavioral Sciences*, 186, 739–743.
20. Lavalley, P., & Briemaster, M. (2017). The study of the use of picture descriptions in enhancing communication skills among 8th-grade students learning English as a foreign language. *I.E. Language Education*, 9(1), 4–11.

21. Martínez, M., & Collaborators. (2020). Extracurricular activities and academic performance: Differences by gender and public and charter school. *MLS Educational Research Journal*, 4(1), 73–89. <https://www.mlsjournals.com>
22. McLaren, I. (2019). The science students' responses to an oral communication skills development initiative: Attitude and motivation. *International Journal of Teaching, Learning in Higher Education*, 31(1), 73–85.
23. Miller, A. L., Rocconi, L. M., & Dumford, A. D. (2018). Focus on the finish line: Does high-impact practice participation influence career plans and early job attainment? *Higher Education*, 75(3), 489–506. <https://doi.org/10.1007/s10734-017-0151-z>
24. Mittleman, J. (2022). Intersecting the academic gender gap: The Education of Lesbian, Gay, and Bisexual Americans. *American Sociological Review*, 87(1), 5–35. <https://journals.sagepub.com/doi/10.1177/00031224221075776>
25. Mulrooney, H. M. (2017). Exploring participation in co-curricular activities among undergraduate students. *New Directions in the Teaching of Physical Sciences*, 12(1).
26. Nasir, K., & Muhammad, S. (2022). A study on effects of co-curricular activities on academic achievements of secondary school students in district Quetta. *International Research Journal of Education and Innovation*, III(1), 318–325.
27. Ogoch, G., & Thinguri, R. (2016). An evaluation of the effectiveness of co-curricular policy in developing talent among the youth in secondary schools in Trans Mara, Kenya. *Journal of Education and Practice*, 282–285.
28. Oliveira, K. A. (2017). The effect of LGBT resource centers on student success & engagement. *Culminating Projects in Higher Education Administration*, 17. https://repository.stcloudstate.edu/hied_etds/17
29. Parajuli, M., & Thapa, A. (2017). Gender differences in the academic performance of students. *Journal of Development and Social Engineering*, 3(1), 39–47.
30. Rani, M., & Keshwal, H. S. (2016). Effect of co-curricular activities on the development of social skills of children with intellectual disabilities. *Journal of Disability Management and Rehabilitation*, 2(1), 18–21.
31. Roy, J. (2019, July 15). Engineering by the numbers. American Society of Engineering Education. <https://ira.asee.org/wp-content/uploads/2019/07/2018-Engineering-by-Numbers-Engineering-Statistics-UPDATED-15-July-2019.pdf>
32. Sakyi-Hagan, N., & Hanson, R. (2022). Gender differences in performance in integrated science among pre-service science teachers: A case of a university in Ghana. *East African Journal of Education and Social Sciences*, 3(6), 1–7.
33. Sami, A., Laraib, & Irfan, A. (2020). The academic achievement of college students based on co-curricular activities. *Journal of Management Info*, 7(1), 16–23.
34. Singh, A. (2017). Effect of co-curricular activities on academic achievement of students. *IRA International Journal of Education and Multidisciplinary Studies*, 6(3), 241–254.
35. Shubhda, P. (2020). Communication skills important for university students. *International Journal of Creative Research Thoughts (IJCRT)*, 8(4), 873–877.
36. Slathia, D. S. (2015). Attitude of university students toward co-curricular activities. *Microcosmos International Journals of Research*, 1(1), 10–12.
37. Tsaousis, I., & Alghamdi, M. (2022). Examining academic performance across gender differently: Measurement invariance and latent mean differences using bias-corrected bootstrap confidence intervals. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.896638>
38. The Trevor Project Research Team. (2020). LGBTQ youth sports participation: Research brief. Retrieved from <https://www.thetrevorproject.org/research-briefs/lgbtq-youth-sports-participation-2/>
39. Ullah, R., & Ullah, H. (2019). Boys versus girls' educational performance: Empirical evidence from the global north and global south. *African Educational Research Journal*, 7(4), 163–167. <https://doi.org/10.30918/AERJ.74.19.036>
40. Venugopal, K. (2016). Impact of thematic approach on communication skills in preschool. *Imperial Journal of Interdisciplinary Research*, 2(10), 2454–1362.
41. Wangyu, M. J. (2014). The impact of gender differences on students' academic performance in secondary schools in Ndumberi division, Kiambu County, Kenya in science subjects and languages

- (Postgraduate Diploma in Education research project). University of Nairobi.
<http://erepository.uonbi.ac.ke>
42. Workman, J., & Heyder, A. (2020). Gender achievement gaps: The role of social costs to trying hard in high school. *Social Psychology of Education*, 23(6), 1407–1427. <https://doi.org/10.1007/s11218-020-09588-6>
43. Zada, N. Y. (2021). The role of co-curricular activities in leadership skills' development among university students. *Journal of Social Sciences Review*, 1(2), 38–52.