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## Self-Determination in Higher Education: A Comparative Study Between Hearing Impaired and Typical Students at Two Saudi Universities

Alsulami Bader M<sup>1</sup>

### Abstract

*Self-determination is a crucial factor in the educational achievements and psychological well-being of students. This research is prompted by the significant educational strides made by Saudi Arabia, as exemplified at Taibah University and King Saud University, which have recently adopted inclusive education by admitting deaf and hard of hearing students alongside the hearing typical students. The study is comparative in design and explores whether factors such as type of hearing loss, academic level, major, and gender account for significant differences in self-determination levels. The study sample comprised 76 students (Males= 40 and Female = 36) from various majors and academic levels who were administered a 25-item questionnaire based on the Functional Model of Self-Determination of Wehmeyer (1996). Additionally, an open-ended question was included to assess students' feelings about their undergraduate experience, providing qualitative insights into the highlights of their academic journey. Results indicate that students at both Taibah and King Saud Universities exhibit self-determination in learning. However, the students at Taibah University demonstrate higher levels of self-determination compared to those at King Saud University at a significant level (Sig=.02). The findings highlighted that students with hearing impairments appreciated the universities' inclusive practices and demonstrated positivity in their academic journey. Despite finding it challenging, they also described their experience as rewarding and fulfilling. The outcomes of this study are expected to contribute to a deeper understanding of the specific needs and strengths of deaf and hard of hearing students in mainstream higher education in Saudi Arabia, potentially guiding policy and support services to foster their academic and personal growth.*

**Keywords:** Comparative Study, Deaf and Hard of Hearing Students, Functional Model, Self-Determination, Higher Education, Saudi Universities.

### Introduction

In the realm of higher education, emphasis on self-determination is of utmost importance, as it has a profound impact on both academic performance and psychological welfare of the students (Wehmeyer, 2021). This phenomenon is especially noticeable among many groups of students who are differently abled, including those who have hearing disabilities. Significant progress in implementing inclusive education has been witnessed in the Kingdom of Saudi Arabia (Allothman, 2014), as both Taibah University and King Saud University have actively enrolled students who are deaf or hard of hearing, alongside their hearing typical peers. Recognizing the importance of inclusive education, this study examines the degrees of self-determination among students with hearing impairments in contrast to their classmates who do not have hearing impairments.

Factors such as type of impairment, academic performance, college major and gender affect the self-determination of deaf and hard-of-hearing students (Alrabiah, 2021; Alharbi & Madhesh, 2018; Curcic, 2009). By understanding these variables in order to customize student support services inclusive environment where hearing impaired students can succeed together with their peers can be created (Ju

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<sup>1</sup>College of Education, Majmaah University Kingdom of Saudi Arabia; Department of Special Education, College of Education; Kingdom of Saudi Arabia – P.O. Box: 66 Almajmaah 11952. Email: [b.alsulami@mu.edu.sa](mailto:b.alsulami@mu.edu.sa)

et al., 2017). This research will provide empirical evidence on how Saudi educational institutions and policy makers can shape policies and supports that will foster integrated development of all students irrespective of their hearing capabilities (Leonor, 2023)

For this reason, the Functional Model of Self-Determination (FMSD) designed by Wehmeyer in 1996 is employed in this research to explicate and quantify self-determination. The paradigm has four essential components: self-realization, self-regulation, autonomy, and psychological empowerment. It brings together the entire things from which adaptive skills and paths for achievement can be evaluated or understood by using this model or theory within an academic setting. The study focuses on key factors such as the nature of hearing impairment, education level, field of study, and gender, aiming to improve support services for hearing-impaired students in Saudi Arabia's higher education. Despite progress in admitting these students, there is a lack of research on their self-determination levels, hindering the development of tailored support (Alanazi, 2020; Alnahdi & Schwab, 2021; Stentiford & Koutsouris, 2021). Understanding these factors is crucial for creating an inclusive educational environment that supports the academic and personal growth of hearing-impaired students. This study, therefore, aims to answer the following questions:

1. To what extent do hearing impaired and typical students at Taibah and King Saud Universities have self-determination to continue Higher Education?
2. Is there any significant difference between hearing impaired and typical students in their self-determination attributed to the university type?
3. What do hearing impaired and typical students at Taibah and King Saud Universities feel about their inclusion in Higher Education?

## **Literature Review**

Saudi Arabia has experienced significant reforms in its education system, characterized by a notable focus on inclusiveness (Alnahdi, 2020; Alnahdi et al., 2019; Alnahdi & Schwab, 2021). Universities like Taibah and King Saud have taken the lead in implementing measures that demonstrate a dedication to provide equal educational opportunities for all students, including those who have hearing impairments (AlHwaiti, 2015; Alrawkan, 2022). The integration of deaf and hard of hearing students into mainstream higher education signifies a notable transition towards more comprehensive policies of inclusivity (Bell & Swart, 2018; Powell et al., 2014). Comprehending the influence of these policies on self-governance is considered essential for formulating future plans and guaranteeing the achievement of a heterogeneous student body (Alamri & Tyler-Wood, 2016; Fatima et al., 2023).

### **Self-determination**

According to Alanazi ([1]), Al Shahrani ([2]), and Al-Zboon and Smadi ([3]), Saudi Arabian culture affects how students learn, especially hearing-impaired children. How a society views topics like uniqueness, liberty, and disability can also affect self-determination. Thus, these cultural differences must be examined to fully understand the study's findings ([4]). According to the Saudi Ministry of Education ([5],[6]), research in this area is based on government policies that promote open education. Al-Shuwail and Dashan ([7]) say they help attain educational excellence, which is in line with the nation's goal of making schools inclusive. In Saudi Arabia, Alamri et al. ([8]) examined how personalised learning (PL) activities can help students meet their own needs and motivation in an online course compared to a one-size-fits-all model.

Using the self-determination theory the study determined the effects of individualized learning basis in e-courses, and found that these have immense potential to fulfil the psychological needs of the students,

and enhance their motivation. Moreover, the interventions were perceived as engaging and satisfying students' learning objectives and inclinations. Furthermore, White et al. (2021) found that certain teaching strategies in the physical mode of education can either support or undermine students' relatedness and competence. The affective factor and learning engagement were found to be adversely influenced by relatedness and competence satisfaction, though satisfaction of needs was positively correlated with positive affect and enhanced participation. Therefore, it could be concluded that adhering to the self-determination theory in teaching had the potential to enhance student outcomes in physical classrooms. In a qualitative study conducted by Alsraisy et al. (2020) at a university in the Riyadh region, teachers' perspectives on blended learning for students who were deaf or hard of hearing were explored. The study utilized a phenomenological approach and conducted semi-structured interviews with three teachers to collect experiential data. The findings revealed highly positive experiences in the use of blended learning with these students. It was found that minor implementation challenges could be overcome through educator commitment and curriculum development. The study recommended training instructors in blended learning and implementing binding university decisions to enhance higher education access and opportunities for deaf or hard of hearing individuals, in line with Saudi Arabia's vision for digital transformation by 2030. Hyde et al. (2009) examined the experiences of deaf and hard of hearing students at a Queensland university with a comprehensive support program. The survey captured students' high appreciation for specialized support services, despite challenges in accessing the academic curriculum and facing social isolation at times. Over a period of 20 years, the graduation rate of these students at Griffith University was notably high, comparable to that of other universities. Sebald (2013) surveyed 76 teachers of the deaf and hard of hearing in a western state of the United States to explore their perceptions of self-determination. The results showed that while teachers believed self-determination to be important, there were discrepancies in the intentional teaching of identified skills. For instance, a high percentage of teachers reported that problem solving was important, but there were variations in the teaching and observation of this skill among students (Mehdi & Ali, 2023).

Albash (2023) highlighted the challenges faced by deaf and hard of hearing (DHH) students in pursuing higher education in Arab countries. The study, which used a mixed methods approach, examined HE programs at eight top Arab universities and found that while some universities have launched programs to support DHH students, there are disparities in the admission and accommodation of these students. Specifically, hard-of-hearing students are admitted to most universities on an equal basis with their typical peers, while deaf students face more limitations and strict conditions for admission. The study proposes mechanisms to improve HE programs for DHH students in Arab countries and establish norms for improving the overall education for the deaf.

### **Inclusive Education**

Inclusive education lies in having all learners, including those with disabilities and speakers of minority languages, in the same classrooms and schools, and providing them with genuine learning opportunities. Saudi Arabia has gone through stages to include inclusive education in Saudi institutions (Alharbi & Madhesh, 2017). Studies on inclusive education are varied (Alanazi, 2020; Alnahdi & Schwab, 2021; Stentiford & Koutsouris, 2021). Stentiford and Koutsouris (2021) found that there is no common understanding of inclusive pedagogies among higher education (HE) researchers. The inconsistency and fragmentation in perceptions of inclusive pedagogies are attributed to the philosophical contestation of inclusion itself. The study suggests that this complexity needs to be acknowledged in discussions of inclusive pedagogies in HE, even if it goes against current performative and market-driven trends. In the Saudi context, Alanazi (2020) explored the perceptions of Deaf and Hard of Hearing (DHH) students and specialist teachers regarding inclusive education in four mainstream primary schools for boys in Riyadh, Saudi Arabia. The findings suggest that there has been a delay in implementing inclusive

policies, and the practices in mainstream schools mainly represent an ethos of integration rather than inclusion. Additionally, the study highlights the need for comprehensive changes in the Saudi education system to promote inclusive education for DHH students. Alnahdi and Schwab (2021) compared Saudi and German students' perceptions of using an inclusion battery (PIQ). The results indicated that Saudi students were mostly positively disposed towards inclusion in schools, but interestingly, agreement with all survey items (which also included negative indicators of inclusion) could point towards some negative perceptions. Both samples did not express differences in their strong inclination to go to school, and strong perceptions towards better peer relations. Additionally, students with learning disabilities in both samples reported lower academic self-concept compared to their peers. Alnahdi (2020) studied teachers' self-efficacy to teach in inclusive classrooms. The findings indicated that teachers were generally quite confident in their ability to work in inclusive classrooms. However, they did have concerns about specific abilities they may need in inclusive classrooms, such as the role of families, raising awareness of legal and policy related inputs on inclusion, and dealing with physically aggressive students. Despite these concerns, the teachers were confident in many other abilities required for teaching in inclusive classrooms.

Saudi Arabia has made significant advancements in its higher education system, moving towards inclusivity by admitting students with hearing impairments (Alanazi, 2020; Almulhim, 2022). This reflects the nation's commitment to providing equal educational opportunities to all without any discrimination. Despite progress, there is little research on hearing-impaired pupils' local self-determination. Understanding self-determination elements is crucial to adapting assistance programmes and regulations to these individuals. These characteristics include hearing impairment type education field of study and gender.

## **Methods**

### **Research Design**

This study aimed to examine the idea of self-determination among students at Taibah University and King Saud University, two esteemed institutions in Saudi Arabia, and among students without hearing problems as well. For an all-encompassing grasp of the self-determination-related variables, the study used qualitative and quantitative approaches. Type of hearing loss, level of schooling, academic major, and gender were all factors. During the 2023–2024 school year, the research was carried out.

### **Participants**

The study sample comprises 76 students purposively selected from various majors and academic levels at Taibah University and King Saud University. To ensure diversity, participants with different types of hearing loss, academic standings, majors, and genders are included. The inclusion criteria encompass students who are deaf or hard of hearing alongside their hearing-typical counterparts. The hearing-impaired who demonstrate sufficient degree of ability for independent learning are then offered specialization in all fields in the university's humanitarian colleges. As for deaf male and female students, they have the opportunity to specialize in the College of Sports Sciences and Physical Activity (physical fitness, sports training, sports and recreational management), and some specializations in the College of Humanities and Social Sciences, such as, information science (records management and electronic archiving track), media (Public Relations Track), Sociology, and Geography. The availability of a specialization for this group depends on the program's ability to provide sign language interpreters, in addition to harmonizing and adapting the curricula of the courses taught by the relevant academic department to support learning amongst the deaf group.

**Table 1:** Demographic Characteristics of Participants.

Participants	Hearing Status	Academic Level	Major	Gender
Taibah University	Hearing-Impaired	Sophomore	Preparatory year	Male
	Hearing-Typical	Junior	Preparatory year	Female
King Saud University	Hearing-Impaired	Senior	Preparatory year	Male
	Hearing-Typical	Freshman	Preparatory year	Female

Taibah University and King Saud University have demonstrated in Table 1 their commitment to creating inclusive learning environments for students with and without hearing loss. This reflects the fundamental changes occurring in Saudi Arabia's educational system, leading towards a more equitable approach. It is crucial to understand the importance of self-determination throughout the entire educational journey, as evidenced by the participants coming from diverse academic levels and fields of study. The research also accounts for the distinct challenges and required competencies associated with various disciplines. Participation from students of both genders further signals these universities prizing gender diversity within academia, acknowledging gender-related factors can contribute to disparities in lived realities. In conclusion, as exhibited in this study, Saudi Arabia has made significant progress implementing inclusive policies and cultivating a more diverse student body.

### Instruments

In order to incorporate qualitative viewpoints, the study makes use of both quantitative data and open-ended questions. For better understand quantitative data, this qualitative component gathered the stories of undergraduates (Alzahrani, 2023; Guibang et al., 2023). The goal of collecting both quantitative and qualitative data was to shed light on the specific challenges faced by and opportunities presented to hearing-impaired and deaf students enrolled in mainstream Saudi Arabian universities. The questionnaire used in this study was developed by Wehmeyer in 1996 and consisted of 25 items based on FMSD. By gauging students' levels of self-awareness, self-control, autonomy, and psychological empowerment, this survey assessed their academic adaptability and performance. To get students' honest opinions of their time as undergraduates, we gave them an open-ended inquiry. To guarantee uniform management, a survey was created, and it is worth mentioning here that the said questionnaire was translated to Arabic and the Arabic version was piloted and reviewed by some experts in the field. The modified version was then administered and used for the purpose of data collection (see Appendix A). The goal of the study was explained to the participants, and they gave their informed consent. Participants could choose between receiving the survey via email or in person, and their answers were more likely to be truthful because of the anonymity guarantee. Qualitative data derived from open-ended questions was used to enhance the quantitative findings.

### Data analysis

Quantitative data obtained from the questionnaire were analyzed using descriptive statistics and inferential statistics. Mann-Whitney test was employed to identify significant differences based on variables like type of hearing loss, academic level, major, and gender. Qualitative data from the open-ended question were subjected to thematic analysis, extracting key themes and patterns that enriched the understanding of participants' experiences. The integration of both quantitative and qualitative data made for a comprehensive analysis of self-determination levels among hearing-impaired and typical students. The research design and methodology were aligned with the study's objectives, aiming to contribute valuable insights into the specific needs and strengths of hearing-impaired students in the context of mainstream higher education in Saudi Arabia.

## Result and Discussion

**RQ1:** *To what extent do hearing impaired and typical students at Taibah and King Saud Universities have self-Determination to continue Higher Education?*

Table 2 compares the scores for four self-determination dimensions which are, self-realization, self-regulation, autonomy, and psychological empowerment between Taibah University and King Saud. It shows that Taibah University generally scored higher ( $M=55.75$ ) in all categories compared to King Saud ( $M=28$ ). The highest difference is seen in the category of Psychological Empowerment, where Taibah University scored 65 compared to King Saud's 32. These results suggest that Taibah University may have a stronger emphasis on fostering self-determination and psychological empowerment among its students compared to King Saud.

**Table 2:** Students' Self-Determination Scores at Taibah and King Saud Universities.

Self-determination	Taibah University	King Saud
Self-Realization	60	30
Self-Regulation	53	25
Autonomy	45	25
Psychological Empowerment	65	32
Total	55.75	28

**R2:** *Is there any significant difference between hearing impaired and typical students in their self-determination attributed to the university type?*

Furthermore, Table 3 presents the results of the Mann-Whitney test comparing the two groups of participants at Taibah University and King Saud. The "Mean Rank" represents the average rank of the two groups, with Taibah University having a mean rank of 6.50 and King Saud having a mean rank of 2.50. The "Sum of Ranks" indicates the total ranks achieved by each group. The "Z" value of -2.323 suggests the test statistic, and the "Sig. (2-tailed)" value of .020 indicates the significance level. In this case, the significant p-value of .020 suggests that there is a statistically significant difference between the two groups in favor of Taibah University' students.

**Table 3:** Mann-Whitney Test.

University	Mean Rank	Sum of Ranks	Z	Sig. (2-tailed)
Taibah	6.50	26.00		
King Saud	2.50	10.00	-2.323-	.020
Total				

**RQ3:** *What do hearing impaired and typical students at Taibah and King Saud Universities feel about their inclusion in Higher Education?*

**Table 4:** Qualitative Insights - Feelings About Undergraduate Experience.

Participant	Feelings About Experience
College of Sports Sciences and Physical Activity	Overall, I feel positive about my academic journey. I find my major challenging but rewarding.
College of Humanities and Social Sciences	The support services have been helpful. Studying is challenging but fulfilling. I appreciate the inclusive environment at the university.

## Discussion

The study found that students at both Taibah and King Saud Universities have self-determination to continue their higher education. Results revealed that students at Taibah University have higher

self-determination than their counterparts at King Saud University. These findings point towards the positive sentiments expressed by participants that resonate with the commendable progress made in Saudi Arabia's higher education. Both universities seem to have fostered a positive and inclusive institutional atmosphere that contributes to the overall well-being of students. These findings align with Alamri et al. (2020) who demonstrated that personalized learning activities in online courses can positively impact students' psychological needs satisfaction and intrinsic motivation. Similarly, the results are consistent with White et al. (2021) who found that teaching strategies aligned with the self-determination theory can enhance students' learning outcomes in physical education by promoting relatedness, competence, and needs satisfaction. These findings emphasize the importance of considering and supporting students' self-determination to improve their overall educational experiences and learning outcomes.

Furthermore, findings also showed that students appreciate the Universities' inclusion of this group of students in their classes. Students with hearing problems showed their positivity in their educational journey. They found it challenging but rewarding and fulfilling. These findings diverge from some earlier studies on inclusive education. Stentiford and Koutsouris (2021) found that there is no common understanding of inclusive pedagogies among higher education (HE) researchers. Alanazi (2020) revealed that there has been a delay in implementing inclusive provisions in higher education, and the practices in mainstream schools mainly represent an ethos of integration rather than inclusion. Additionally, the study highlights the need for comprehensive changes in the Saudi education system to promote inclusive education for DHH students. The findings, however, agree with Alnahdi and Schwab, (2021) who found that Saudi students generally had a more positive perception of inclusion in schools, but also tended to agree more with all items in the PIQ, including negative indicators of inclusion. Both samples did not express differences in their strong desire to go to school, and they both had strongly positive responses regarding getting along well with classmates. This is also affirmed by Alnahdi (2020) who found that Saudi teachers generally had a good level of confidence in their ability to work in inclusive settings.

The acknowledgment of helpful support services indicates that the universities are proactive in providing resources and assistance tailored to the needs of students, ensuring an inclusive and supportive learning environment. When some majors seem to have problems, it doesn't mean that they are not good but rather than the challenges are real. This shows that these universities are preparing students for real-world challenges and helping them navigate successfully through their years. All these statements put together show that academic experiences at Taibah University and King Saud University should provide not only academic enrichment but also personal satisfaction. This is consistent with the progressive shifts in Saudi Arabia's improvement in higher education generally. Scores on self-determination among participants from Taibah University and King Saud University were influenced by personal differences and inclusive policies. Furthermore, the study recognizes Saudi Arabia's remarkable progress and therefore confirms that both universities appreciate the need to cater for diverse student needs. More importantly, conducting research on self-determination can offer some insights into improving support services and policies that will result in better learning experience for all students, inclusive education to cater for everybody.

## **Conclusion**

Comparative research conducted at Taibah University and King Saud University on self-determination between hearing-impaired students and their hearing peers is a commendable effort in the remarkable growth of higher education in Saudi Arabia, with focus on inclusiveness. Through demographic factors, self-determination scores, and qualitative insights explored in the study, it is possible to draw some important conclusions. The study unveils crucial insights into students' self-determination and the

environment of inclusivity in higher education institutions like Taibah University and King Saud University in Saudi Arabia. It highlights that while both universities foster positive atmospheres conducive to students' well-being, Taibah University appears to have a higher level of self-determination among its students compared to King Saud University. Moreover, the positive sentiments expressed by participants align with previous research demonstrating that personalized learning activities and teaching strategies aligned with the self-determination theory can significantly impact students' motivation and satisfaction. These findings emphasize the importance of nurturing students' self-determination to enhance their educational experiences and outcomes. Regarding inclusivity, the study presents a positive perspective from students with hearing impairments, making a departure from some prior studies indicating challenges in implementing inclusive pedagogies in higher education. There's a call for comprehensive changes within the Saudi education system to promote inclusive education for students with disabilities, aligning with the acknowledgment of helpful support services provided by the universities to cater to diverse student needs. Additionally, the study highlights that challenges in certain majors do not indicate inadequacy but rather serve as opportunities for universities to prepare students for real-world obstacles, contributing to their personal and academic development. Overall, the findings aim towards ongoing improvements in support services and policies tailored to diverse student needs, emphasizing the role of research on self-determination in enhancing the overall learning experience and promoting inclusive education for all students. This highlights the progressive shifts in Saudi Arabia's higher education landscape, emphasizing the need to cater to individual differences and foster inclusive environments for optimal learning. Lastly, the dedication of both the universities included in this study towards diversity and tolerance can be seen by the fact that there are both hearing impaired as well as hearing typical students from different academic levels, majors, and genders. The range of self-determination scores shows how unique each student's experience is while also stressing the need for considering different aspects when thinking about self-determination. These testimonies are vivid, detailed and suggest that the institution is friendly enough to include all throughout academic life.

To expand on these findings, it is recommended that both Universities continue to strive for an inclusive environment. This includes delivering support services tailored to individual students' needs while implementing comprehensive programs centered on them.

### **Recommendations**

The following recommendations are based on the results obtained:

Mentorship, counseling, or academic accommodations tailored to the needs of hearing impaired students as well as adapting the curriculum or teaching methodologies can go a long way in ensuring inclusion and empowerment of the hearing impaired students. They may also be trained in appropriate communication methods as per their learning styles. Faculty and staff that deal with hearing impaired students should be updated in new developments in pedagogy through workshops or training sessions. This could help foster a more inclusive and understanding academic environment. At policy level, changes and enhancements in educational institutions to better accommodate the specific needs of deaf and hard of hearing students need to be made. This might include allocation of resources, infrastructure modifications, or updated guidelines for inclusive education. Although the participants were satisfied with the inclusive policies at the universities, fostering a sense of community among students with hearing impairments by organizing events, clubs, or forums where they can connect, share experiences, and support each other can be a healthy practice.

### **Limitations**

Given its specific scope and aims, this study does not delve deeper into understanding the nuances of self-determination among deaf and hard of hearing students. Longitudinal data to track the progress of



the students could not be accommodated in this study. Neither could the value of collaboration with hearing typical students be established here which could lead to more comprehensive findings and development of effective strategies to tackle the challenges faced by the hearing impaired students. It is hoped that future replications will be mindful of these.

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## Appendix A

Self-Determination in Higher Education: A comparative study between hearing impaired and typical students at two Saudi Universities

### Research Questionnaire

Thank you for participating in this research study. Your responses are valuable in understanding the self-determination levels of students in higher education. Please answer the following questions honestly and to the best of your ability.

### **Section 1: Demographic Information**

1. Name (Optional): \_\_\_\_\_
2. Gender:
  - Male
  - Female
  - Other (please specify): \_\_\_\_\_
3. Academic Level:
4. Major: \_\_\_\_\_
5. Hearing Status:
  - Hearing-Impaired
  - Hearing-Typical

### **Section 2: Self-Realization (Please rate on a scale of 1 to 5, where 1 is strongly disagree, and 5 is strongly agree)**

6. I am aware of my strengths and weaknesses.
7. I have a clear understanding of my academic goals.
8. I can identify areas where I need improvement in my studies.
9. I feel confident in my ability to succeed academically.
10. I am aware of my personal interests and passions.

### **Section 3: Self-Regulation (Please rate on a scale of 1 to 5)**

11. I effectively manage my time for academic tasks.
12. I set specific goals for my academic achievements.
13. I use study strategies that work best for me.
14. I can adapt to changes in my academic environment.
15. I consistently complete assignments and tasks on time.

### **Section 4: Autonomy (Please rate on a scale of 1 to 5)**

16. I make independent decisions about my academic path.
17. I am comfortable seeking help or support when needed.
18. I have control over my choices in academic activities.
19. I take responsibility for my academic successes and failures.
20. I feel free to express my opinions and ideas in class.

### **Section 5: Psychological Empowerment (Please rate on a scale of 1 to 5)**

21. I feel a sense of control over my academic destiny.
22. I believe in my ability to overcome academic challenges.
23. I have a positive outlook on my academic future.
24. I feel motivated to excel in my studies.
25. I am confident in my ability to influence my academic outcomes.

### **Section 6: Open-Ended Question**

Please share any additional thoughts or feelings about your undergraduate experience, especially regarding the support you have received.

**Thank you for your participation!**