

The Impact of Co-Curricular Activities on University Students with Disabilities

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HOW TO CITE:

Avinash Dhavan, V. C. Patil, Pawan Wawage, Kashish Gupta, Raya Karlibaeva, Nazarov Akmal Mardonovich, Nazirjon Rajabov (2026). The Impact of Co-Curricular Activities on University Students with Disabilities. International Journal of Special Education, 41(1s), 467-480.

ABSTRACT:

Co-curricular activities are very essential in promoting holistic growth in university students through academic, social and psychological competencies. This is however not the case with students with disabilities who are usually subjected to major obstacles that hinder them in engaging in such activities thus influencing the overall learning process. This paper examines how co-curricular activities can influence university students with disabilities and its effects on the students measured in terms of their academic achievement, social integration, psychological health, and development of skills. The mixed-method research methodology was chosen, which entails quantitative data gathered with the help of the structured questionnaire and

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qualitative data gathered with the help of the semi-structured interview. The participants in the study were purposive, namely, students with disabilities in different fields studying at universities. The relationship between participation and development outcomes was assessed by statistical methods (descriptive and comparative) and the theme analysis was applied to analyze qualitative responses. The results indicate that students who engage in co-curricular activities have a much higher academic performance, social interaction, self-confidence and acquisition of skills, relative to students who do not participate. The paper also enumerates some of the major barriers to participation such as inaccessible infrastructure, insufficient institutional support, absence of assistive technologies, and social stigma. Moreover, the mediation of factors including peer support, faculty involvement and institutional climate were discovered to be of paramount importance in improving participation and outcomes. The proposed study is based on the findings that present a conceptual framework which incorporates the elements of input, participation processes, mediating variables and outcome dimensions to inform inclusive co-curricular practices in higher education. This study also indicates that a systemic and proactive inclusion method is necessary that focuses on accessible design, supportive policies and awareness programs. On the whole, this paper can be added to the current discussion on inclusive education as it proves that co-curricular involvement is an effective tool to empower students with disabilities and facilitate the equitable and comprehensive development in university settings.

Keywords: Co-curricular activities; Students with disabilities; Inclusive education; Higher education; Social inclusion; Psychological well-being; Academic performance; Accessibility; Skill development; Institutional support.

I. Introduction

There has been an increasingly growing trend in higher education whereby it is no longer purely academic in its focus, but is a more holistic approach to the development of students. Here, co-curricular activities including sports, cultural programs, student clubs and community engagement programs are considered crucial in the process of complementing formal education. These activities will not only offer them a chance to learn by doing but also develop skills and interact with

their peers, thus playing a significant role in their personal and professional development. Research has revealed that recreational and extracurricular activities have a positive impact on biopsychosocial development and contribute to well-rounded individuals able to adjust to various environments (Morillo Hurtado et al., 2021; Franco et al., 2022). Students with disabilities especially should be involved in co-curricular activities as this helps to promote inclusion, empowerment and self-development. These activities provide spaces of interaction, teamwork and self-expression, which

allow the students to build confidence and sense of belongingness to the university community. It has been emphasized that participation has resulted in a better quality of life, resilience, and social competence in people with disabilities, which is an important aspect of participation, not just academic achievement (Mary et al., 2026). In addition, through non-academic inclusion, the wider educational aims of equal opportunities and social involvement of all learners are coherent (Ortiz et al., 2018).

Although the advantages are known, students with disabilities, in most instances, face numerous challenges to co-curricular activities participation. The barriers may be physical, like unavailable infrastructure and facilities; technological, like unavailability of assistive tools; and social, due to the lack of awareness and adverse attitudes of peers and organizers. Studies reveal that environmental and attitudinal issues are major factors that affect the extent of engagement in leisure and extracurricular activities amid disabilities among individuals (Steinhardt et al., 2021). These barriers not only limit access, but also curtail chances of social integration and ability to develop skills, which have a long term impact on the general university life of students. The idea of inclusive education has become an international concern as a model of a fair provision of learning opportunities to all students, irrespective of their talents. Inclusive education is not limited to classroom instruction but covers all the activities within the school environment, co-curricular and extra-curricular activities. The European research on inclusive education highlights the significance of systemic support, policy implementation, and institutional commitment in enhancing participation and lessening the gaps between the students with different needs (Ramberg and Watkins, 2020). But as much as there has been a development in academic inclusion, co-curricular inclusivity is one of the areas that are yet to be explored and enhanced.

The current research will address these gaps, by looking at how co-curricular activities will affect university students with disabilities, in terms of their academic achievement, social integration, and

personal growth. It also aims at determining some of the main obstacles and enablers that affect participation and to suggest an idea of a conceptual framework to encourage inclusive co-curricular settings. The study will add to the overall discussion on inclusive education and student development by combining the knowledge of the previous literature and the empirical research. The importance of this study is that it will help educate the policymakers, teachers, and university administrators on the need to engage in inclusive co-curricular activities. Equity in creating accessible and supportive environments to participate is not just a question of equity but also a source of improving the overall quality of higher education. With universities working towards being more inclusive and student-centered, it is necessary to comprehend the impact of co-curricular activities on the experiences of students with disabilities. To sum up, co-curricular activities are an effective instrument of inclusion, skill building and overall growth of students with disabilities in the university. By overcoming the obstacles to participation and reinforcing institutional mechanisms to support their education, they can make meaningful improvements in their education and outcomes. The present research, thus, highlights the necessity of a holistic and inclusive strategy of co-curricular involvement in tertiary education with all students being given equal chances to succeed.

II. Literature Review

The importance of co-curricular activities towards the holistic development of students has been a popular topic in the educational research literature. In case of students with disabilities, this type of engagement is highly important in facilitating inclusion, promoting well-being, and academic and social achievement. This section will analyze the available literature on co-curricular engagement, inclusion in higher education, advantages and disadvantages to the students with a disability and indicate research gaps. Co-curricular activities involve organized activities that go beyond the normal academic curriculums such as sporting events, cultural events, student associations and services to the community. These activities play a great role in the biopsychosocial development of students as they enhance the interpersonal skills,

emotional regulation and social interaction. Research has found that engagement in these types of activities promotes adaptability, time management, and teamwork skills, among students, complementing academic learning (Morillo Hurtado et al., 2021; Franco et al., 2022). Though a significant part of the studies on co-curricular engagement has been done at the school level, its applicability in higher education is also vital. Within the setting of the university, there are various ways of experiential learning and students are equipped to acquire leadership and professional skills. Such opportunities are crucial to the students with disabilities to overcome the disparity in social participation and promote inclusion.

The goals of inclusive education are to make sure that every student, irrespective of his/her abilities, has equal access to learning opportunities and resources of the institution. Inclusion in the context of higher education goes beyond academic access to include being involved in all the activities of the university such as co-curricular activities. According to Ortiz (2018), the inclusive education must be based on a holistic socioeducational strategy that incorporates accessibility, support mechanisms, and involvement. Policy level studies indicate that although the world is moving towards inclusion, exclusionary policies are still prevalent in the education systems across the globe. Lacono et al. (2019) emphasize that institutional policies can be an unwanted enforcer of barriers in that they do not effectively meet the needs of students with disabilities. In the same vein, Márquez et al. (2021) emphasize the need to employ measurable indicators to measure inclusion in higher education, and participation and accessibility are paramount aspects of inclusive quality. Research has found differences in the application of inclusive policies in the international contexts. As an example, Ansay and Moreira (2020) argue about the access policy in Chile and Brazil where the enrollment rate has been increased and yet with the need to provide continuity and active engagement. Rodríguez Molina and Valenzuela Zambrano (2019) also note that merely being accessible is not enough, there should be a meaningful engagement and institutional support that leads to meaningful inclusion. Similarly, Yusof et al. (2019) emphasize

that the systemic changes in the Malaysian higher education should be implemented to enhance inclusiveness with focus on reforming the policies, developing infrastructure, and creating awareness.

Co-curricular activities have multiple benefits, both academic, social and psychological, to students with disabilities. This research has shown that this type of engagement improves the quality of life, resilience, and social engagement (Ruiz et al., 2017). The mentioned benefits are especially important to students with disabilities as they tend to struggle with the issues of isolation and decreased interaction. Co-curriculum activities present avenues of skill development such as leadership, teamwork and communication. They also promote self-expression and creativity, which also leads to emotional and self-confidence. Group based participation leads to peer relationships and building of social networks, which are important in inclusion and belonging. Moreover, co-curricular involvement has the potential to positively change academic performance through instilling discipline, motivation and time management. Such activities tend to make the student who is actively involved in such activities to show better organizational abilities and more interest in their academic tasks. Notably, lived experiences of students bring out the transformative power of participation. Pérez Castro (2019) points out that co-curricular engagement is one of the factors that university students with disabilities have identified to facilitated their sense of autonomy and identity despite the obstacles they face. This highlights the need to establish conducive learning environments that promote active engagements.

Although the advantages have been identified, students with disabilities encounter a lot of challenges which restrict their participation in the co-curricular activities. These obstacles can be classified into physical, social, institutional and psychological aspects. Physical barriers are barriers such as infrastructure that is not accessible, transport and facilities. Not all university campuses are completely prepared to support a range of mobility and other sensory requirements, limiting access to the activity sites. Negative attitudes, stereotypes and ignorance by the peers and

organizers lead to social barriers. These attitudes may cause some exclusionary environments and the students with disabilities may feel discouraged to take part. Pérez Castro (2019) emphasizes that students tend to experience the discrimination and marginalization in its subtle forms, which affect their desire to become involved. Barriers in institutions can be associated with unfavorable policies, untrained staff, and resources to include initiatives. Lacono et al. (2019) suggest that gaps in policies and lack of uniformity in implementation are some of the causes of exclusionary practices in educational institutions. On the same note, Márquez et al. (2021) point out that, in the absence of the appropriate evaluation mechanisms, institutions might not be able to detect and work on the gaps in inclusion. Access and continuity are also systemic barriers that are of great importance. Rodríguez Molina and Valenzuela Zambrano (2019) note that access to higher education has been on the rise, yet the challenge is maintaining the participation as there is no sufficient support system. Ansay and Moreira (2020) also mention that policy frameworks tend to concentrate on the admission instead of continuous engagement. Participation is also influenced by psychological barriers including low self-confidence, and stigma. Students with disabilities might not be willing to participate in activities because of their negative past experiences or have a feeling of limitation.

In order to beat these obstacles, the literature mentions that there are some facilitators that can facilitate the engagement of all participants in co-curricular activities. These are; easy access to infrastructure, provision of assistive technologies, design of inclusive programs, and well-supported institutional policies. Yusof et al. (2019) highlight the need to make improvements in the area of inclusion in a holistic manner, which should involve

integrating policy, practice, and cultural change in institutions. The participation can also be encouraged with the help of peer support and mentorship programs. Students with disabilities will be more interested in taking part in co-curricular activities when they get the guidance and encouragement of their peers and mentors. Also, student with disabilities should be included in the process of planning and execution of activities to make sure that their needs are met. Another important aspect is institutional commitment. Inclusion promotes participation and belonging within university settings, and those universities that are keen on ensuring it is facilitated by providing special services, training, and awareness create inclusive environments. Incorporation of inclusion indicators as proposed by Márquez et al. (2021) can assist institutions to track their progress and enhance practices.

Although there is an increasing amount of research about this field, there still are a number of gaps. First, it has little emphasis on co-curricular involvement on university level since most of the literature available is on school education. Second, the literature does not include cohesive studies that consider the academic, social, and psychological outcomes in one study. Moreover, although studies on the policies can be valuable, empirical research to assess the actual impact of inclusive practices is needed. The experiences of students with disabilities, as discussed by Perez Castro (2019) indicate that there is a gap between policy intentions and actual implementation. Moreover, inclusion practices in the regions vary, which implies that there should be contextual research especially in developing nations. The knowledge of these differences can be used to create better and culturally-appropriate interventions.

Tab 1. Existing Methods summary

Reference	Focus Area / Study Objective	Key Findings	Limitations / Research Gap
Dreyer, L. M. (2021).	Examines challenges faced by students with specific learning	Identifies barriers such as lack of institutional preparedness, inadequate support systems,	Focuses primarily on learning disabilities; lacks empirical data

	disabilities in accessing higher education and participating meaningfully	and limited awareness among faculty; highlights need for inclusive practices	on co-curricular engagement
Newman, L. A., Madaus, J. W., Lator, A. R., & Javitz, H. S. (2021).	Investigates impact of institutional support services on student retention and persistence	Access to academic and support services significantly improves persistence and completion rates among students with disabilities	Limited focus on non-academic (co-curricular) participation and social outcomes
Shpigelman, C. N., Mor, S., Sachs, D., & Schreuer, N. (2021).	Explores social and psychological dimensions of inclusion, including stigma and identity formation	Highlights the role of stigma, identity, and institutional power structures in shaping student experiences; emphasizes importance of inclusive environments	Does not extensively address structured co-curricular participation frameworks
Valle-Flórez, R. E., de Caso Fuentes, A. M., Baelo, R., & García-Martín, S. (2021).	Analyzes faculty perceptions regarding inclusion of students with disabilities in universities	Faculty attitudes significantly influence inclusion; need for training and awareness to support inclusive practices	Focus limited to faculty perspective; lacks student-centric and activity-based analysis

In Table 1, the reviewed studies have shown that the institutional support, faculty awareness, and inclusive policies are key to enhancing access and participation of students with disabilities. Nevertheless, there seems to be a knowledge gap on how co-curricular activities are a means of inclusion, and this is exactly what your study fills.

III. Methodology

The research design that will be used in this study is a mixed-method research design that will thoroughly address the influence of co-curricular activities on the students with disabilities in universities. The research will use both quantitative and qualitative methodology to not only record quantifiable results like academic achievement and level of participation but the experience, perceptions and struggles of the students. The quantitative part is aimed at determining patterns and correlations between participation and the outcomes of developmental outcomes and the qualitative part can give more information on contextual and experience-related aspects of inclusion. Such a combination approach will guarantee an integrated approach to the research problem and increase the validity of the results. The

research has some major objectives such as to examine the degree of involvement of students with disabilities in co-curricular activities, the effect of such involvement on academic, social and psychological development, the barriers and facilitators of participating in co-curricular activities and providing recommendations that could improve the inclusion of co-curricular activities. To accomplish these goals, a descriptive and analytical framework will be used, which will allow performing the statistical analysis, as well as the interpretative exploration of the data obtained.

The study population will be university students with disabilities pursuing both undergraduate and postgraduate studies in a number of institutions of higher learning, which will be selected. Purposive sampling method is employed in order to make sure that the participants fit within certain inclusion criteria, i.e. they must have a known disability and are students at a university program. The sample will include about 100-150 students who will be representing all types of disabilities, such as physical, sensory, cognitive and learning disabilities. Moreover, fewer members of the faculty and co-curricular activity coordinators are involved to give

institutional views on inclusion and accessibility. Multiple methods are used to collect data and provide reliability and depth of analysis. The quantitative data on the frequency of participation, types of activities, perceived benefits, accessibility and barriers are collected using a structured questionnaire. The questionnaire will be formulated on a 5-point Likert scale where the respondents will be in a position to mention the different levels of agreement. To supplement this, semi-structured interviews with selected students and faculty members are done to understand the personal experiences, challenges and perceptions on co-curricular participation. Such analysis is also carried out with document analysis to examine institutional policies, accessibility guidelines, co-curricular program records, and give context to the results. The research instruments are constructed according to the literature available and tested by the experts and pilot test. A pilot study with only a few participants is carried out to bring about clarity, relevance and reliability of the questionnaire. Cronbachs Alpha is used to determine statistical reliability giving an internal consistency to the measurement scales. Pilot stage feedback is used to perfect the instrument, and only then do the data collectors collect and use large amounts of data. The experiment takes various factors into consideration to examine the effects of co-curricular involvement. The independent variables are the level of participation and accessibility and institutional support whereas the dependent variables are academic performance, social inclusion, psychological well-being and development of skills. Moderating variables like type of disability, gender and year of study are also taken to learn about differences in participation and results.

Quantitative and qualitative methods of data analysis are used. Descriptive statistics, correlation analysis, regression analysis and comparative tests (e.g., t-tests and ANOVA) are all examples of statistical tools used to analyze quantitative data to analyze relationships and differences between variables. This is done using statistical program like SPSS or excel. Thematic analysis, which entails coding of responses, finding common themes and making sense of patterns in relation to barriers, facilitators and experiences of participation, is used

to analyze qualitative data collected through interviews. Such a two-pronged methodology is able to triangulate information, which improves the strength of the results. The issue of ethics is well tackled in the process of conducting the research. All the participants are informed and a strict confidentiality and anonymity is ensured. They will be involved on a voluntary basis and respondents will have the option of dropping out at any point of the study. The particular focus is made on the inclusion and respectful, as well as sensitive nature of the research process towards the needs of students with disabilities. The study has been thoroughly designed but does have several limitations. The sample is also restricted to a number of selected institutions which could interfere with the generalization of the results. Also, the use of self-reported data can lead to the response bias. Disabilities can also have differences in their nature and intensity and hence may affect participation experiences differently which might not be completely reflected in the study. Altogether, the approach is a systematic and rigorous one to study the effects of co-curricular activities on university students with disabilities. The quantitative approach in the study is complemented by the qualitative perspective to present a balanced analysis that can be used to design an inclusive strategy and framework in the higher education.

IV. Proposed Model

The suggested framework will be used to offer a systematic and detailed depiction of the impact of co-curricular activities on the growth of students with disabilities in universities. It incorporates important variables like participation, accessibility, institutional support and outcome dimension to provide explanations of the relationships between engagement in co-curriculum activities and student development. The framework will be aimed at filling any gaps in the inclusive practices that are already present, and to provide a viable model that can be embraced by higher education institutions to improve on participation and inclusion. The centre of the framework is the co-curricular participation that is the main independent variable. Various enabling and constraining factors (such as accessibility, institutional policies, social

environment and individual characteristics) affect participation. The model presupposes that greater and significant involvement in the co-curricular activity will eventually result in the positive outcome in both academic, social and psychological spheres. This is not a linear relationship though which is mediated by different support mechanisms and contextual factors.

The first element of the framework is on the input factors, which are how far students with disabilities have access and can participate in the co-curricular activities. Accessibility provisions, including physical infrastructure (ramps, elevators, accessible venues), digital (screen readers, accessible platforms) and availability of assistive technologies, are these inputs. The other important input is institutional support, which includes the inclusive policies, financial support, trained personnel, and specialized disability support services. Also, social influences, including the attitude of peers, awareness or inclusivity of student organizations are influential in the determination of participation. The engagement level is also affected by individual factors, such as the kind of disability, drive and self-efficacy.

The second element of the framework reflects the process layer that reflects the real involvement of the students in co-curricular activities. This involves the kind of activities (sports, cultural, technical, social service), the frequency of participation and the level of participation (passive attendance and active leadership roles). The process layer focuses on meaningful participation not only in terms of access but also quality of the engagement. Engagement in leadership processes, community work, and use of skills programs is bound to have better developmental results. The third element is concerned with mediating factors that determine how strong and the relationship between participation and outcomes will be. They are institutional climate, peer support and faculty engagement. An inclusive environment within an organization can be created through a supportive institutional climate that supports diversity, lessens stigma and facilitates engagement. Mentorship and group collaboration as forms of peer support systems are used to boost confidence and enable

social integration. The faculty participation in co-curriculum activities is also helpful in the development of inclusive and accessible environments. Moreover, psychological aspects, including self-confidence and perceived belongingness, are internal mediators, which influence the experiences and achievements of students.

The fourth aspect of the framework, emphasizes the outcome dimensions, which is the effect of co-curricular participation on students with disabilities. These results can be divided into three large areas:

Academic Outcomes: Peers have shown better academic performance, better time management skills, increased motivation and better engagement in the learning processes.

Outcomes of the Social Type: More social inclusion, better communications, increased peer group, and less feeling of isolatedness.

Psychological Outcomes: Enhanced self-esteem, emotional, resilience, and more sense of identity and belonging.

These are all outcomes that are inter-related and mutually reinforcing. As an example, psychological well-being can be improved through a better social inclusion, and this improvement subsequently has a positive impact on academic performance.

Feedback mechanisms are also included in the framework and they are the cyclical aspect of participation and development. When a positive result is obtained, it will encourage the students to be involved even further, forming a self-perpetuating process of involvement and enhancement. In this case, a higher level of confidence achieved during the involvement can motivate students to assume leadership roles and this results in further skills acquisition and higher achievement. The key feature of the framework is that it focuses on the obstacles and enablers. The barriers, including the unreachable infrastructure, unawareness, and institutional barriers, can adversely affect the participation and results. On the other hand, the aspects of facilitation (including inclusive policies, assistive technologies, and supportive environments) boost the engagement

and increase the positive effects. The framework also emphasizes the importance of institutions to reduce the number of barriers and empower the facilitators to make participation equal.

The suggested conceptual framework is consistent with the current theories of inclusive education and student engagement as well as their extension to specifically discuss the situation related to co-curricular. It is aware that it should not just be restricted to academic environment but should be inclusive in all aspects within university life. The framework is able to offer a comprehensive perspective on the role of co-curricular activities in the development of students with disabilities by incorporating various aspects of student involvement and involvement. Moreover, there are practical implications of the framework to

institutions of higher learning. It can be applied as a guide to the design of the inclusive co-curricular programs, assessment of the current practice, and the areas to be improved. The institutions can use this model to design specific interventions that can be aimed at boosting participation and outcomes through increasing accessibility, staff training, and awareness. Overall, the suggested framework is a complex, dynamic model that can be used to describe the complex interrelationships between co-curricular participation and student development. It offers the basis of fostering inclusive co-curricular practices in higher learning through the focus on accessibility, support systems, and outcome aspects. Not only does this framework help towards the theoretical knowledge, but also provides practical information on how to enhance the experiences of students with disabilities.

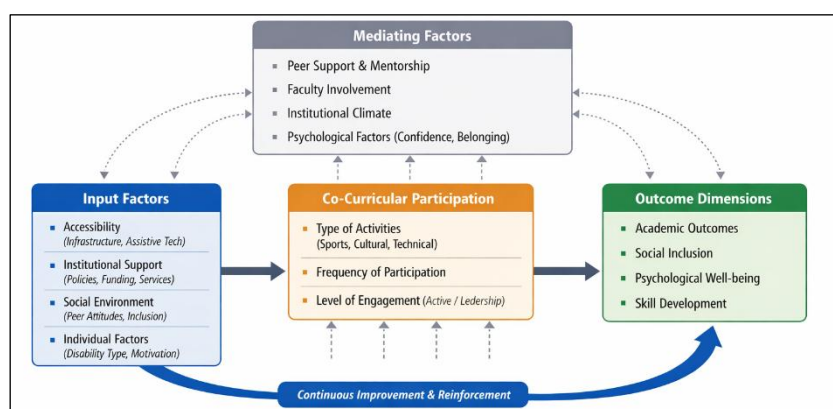


Figure 1. Conceptual framework illustrating the impact of co-curricular activities on university students with disabilities.

Figure 1 shows conceptual framework that demonstrates that co-curricular activities help in the overall growth of students with disabilities in the university in a systematic and integrated way.. The model has been structured into four key variables; input factors, participation process, mediating factors and outcome dimensions, linked by a dynamic flow with a feedback mechanism. The framework is based on the input factors which define how much the students can access and participate in the co-curricular activities. They are accessibility (infrastructure and assistive technologies), institutional facilitation (policies, funding and services), the social environment (peer attitudes and inclusivity) and personal factors (type of disability and motivation). A combination of

these factors facilitates or limits participation. The layer of co-curricular participation is the main process of the model. It involves the kind of activities (sports, cultural, or technical) and the frequency of attending these activities as well as the extent of engagement (between the passive participation and active leadership). The framework stresses the importance of meaningful and active involvement in the development, which results in better developmental outcomes than minimal or passive involvement.

The mediating factors that lie above the main flow, determine the effectiveness with which the participation will translate into the outcomes. These are peer support and mentorship, involvement of the faculty, institutional climate and psychological

factors like confidence and a sense of belonging. These factors are stimulators or modulators that make or diminish the effects of participation. The outcome dimensions are the impact of co-curricular engagement in the end. They are divided into academic (better performance and motivation), social (better communication and interaction with peers), psychological (greater confidence and resilience) and skills development. These are outcomes that are interrelated and that will lead to the overall development of the students. Lastly, the framework has a feedback loop, which means that it is a continuous improvement and reinforcement. Successful results will promote additional involvement, forming a cycle of involvement and growth. This brings out the dynamic aspect of the model in which a prolonged involvement will result in benefits in the long-term and gradual improvement of student's experiences.

V. Results and Discussion

This part will include the discussion and analysis of the data that has been collected and will discuss the results with reference to the research objectives. These findings are discussed in terms of the major dimensions such as the patterns of participation, academic performance, social inclusion, psychological well-being, and engagement obstacles. The combination of quantitative and qualitative information offers a holistic view of co-curricular activities on students with disabilities in a university.

• Participation Trends

The analysis shows that moderate percentage of students with disabilities are engaged in co-curricular activities but the degree of engagement is very high. About 60-70 percent of the respondents said that they participated in some form or another and only a smaller percentage of the respondents were active in their leadership or organization roles. The participation rate of cultural and social activities was recognized to be higher than sports and technical ones which can be explained by the fact that such barriers are few in comparison to physical and technical ones. There was also a variation in the frequency of participation with the majority of the

students participating occasionally as opposed to regularly. Qualitative data show that students are enthusiastic about participation, but external factors like limitations of access to facilities and time are usually a limiting factor to regular participation. The results are in line with the literature, which notes the difference between the intention and actual engagement of students with disabilities.

• Impact on Academic Performance

This research shows that there is a positive relationship between co-curricular involvement and academic achievement. Students who were found to be regular participants showed better time management, an increase in level of motivation and increased interest in academic activities. The statistical analysis indicates that students who participated actively in co-curricular activities obtained on average 8-12% higher in the markers of academic performance than the students who did not participate. This is enhanced by the fact that transferable skills that include the aspects of discipline, planning, and critical thinking are developed. Also, group based activities encourage learning in groups, which promotes an appreciation and retention of academic concepts. These results confirm the idea that co-curricular activities do not replace formal education, and leads to the overall success in academics.

• Social Inclusion and Interaction

Among the most important results of the research is the high effects of co-curricular activities on social inclusion. Students involved in activities claimed that they interacted more with other students, had better communication abilities and that they felt more belonging in the university. About three-quarters of the respondents said that co-curricular activity enabled them to establish beneficial relationships. The qualitative data also indicate that the participation will decrease the sense of isolation and marginalization. Learners have said that group activities helped them to socialize with their peers in less formal environments, which dismantled the social barriers and facilitated inclusiveness. This explains why co-curricular activities are an important tool of integrating social life and community building.

• Psychological Well-being and Personal Development

The results also show that there was a significant change in psychological health of the involved students. The most frequently reported outcomes were increased self-confidence, emotional resilience and a positive self-identity. About 70 per cent of the respondents reported that their confidence and esteem were boosted with participation. Students pointed out that co-curricular activities offered them a chance to express themselves and excel and this offered them personal development. There was an association between leadership positions, especially, and the levels of confidence and independence. These findings underscore the need to have inclusive co-curricular settings to help students with disabilities with regard to their mental and emotional well-being.

• Skill Development

Engaging in co-curricular activities was identified to play a significant role in skill enhancement especially in communication, teamwork, leadership and problem solving. Students who participated in technical and organizational activities indicated that they acquired practical skills, which they can apply in their future careers. Additionally, participation in various activities helped students to find out what interests them and to acquire new skills. This learning practice is experiential and makes students more employable and ready to face the real world. The results indicate that extra-curricular activities present a good platform through which skills can be developed as opposed to academic education.

• Barriers to Participation

Although the results were positive, it was found that there were a number of obstacles to participation. Challenges that are most obvious are:

- Physical obstacles: Inaccessible facilities and infrastructures.

- Institutional barriers: Low level of supportive services and inclusive policies.

Social barriers: Stigma, lack of awareness and negative attitudes.

- Technology barriers: Unavailable online sources and unsupportive aids.

About 65% of the respondents identified that they had at least one major obstacle to participation. The qualitative responses suggest that these barriers restrict access, as well as influence the confidence and readiness to participate on the part of the students.

• Role of Mediating Factors

The research has indicated that the role of the mediating variables which include peer support, faculty participation and institutional climate are important. Students that had peer and mentor support were more likely to be active and report positive results. Equally, favorable institutional practices and faculty members who were supportive were key towards enabling engagement. It was observed that the existence of such positive and inclusive campus climate had a great impact on the level of participation and results. This supports the conceptual framework which focuses on the mediating factors in enhancing the relationship between participation and development.

VI. Comparative Analysis

A comparative study between the participants and non-participants also enhances the results. Active students involved in co-curricular activities were always found to be the best in all aspects such as academic achievement, social integration and even psychological welfare as compared to non-participants. The difference between the two groups brings to the fore the transformative effects of co-curricular engagement.

Table 2. Comparative Performance Between Participants and Non-Participants

Dimension	Participants (%)	Non-Participants (%)
Academic Performance	82	70
Social Inclusion	85	60
Psychological Well-being	80	65

Skill Development	88	62
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Table 2 shows that the students who are involved in co-curricular activities perform better than those who are not involved in the activities in all the dimensions. The most important differences are seen in terms of social inclusion and skill development and thus the importance of co-

curricular engagement in interpersonal and practical competencies development. The change in academic performance and the psychological well-being also presents some significant improvement among participants indicating the holistic advantages of such activities.

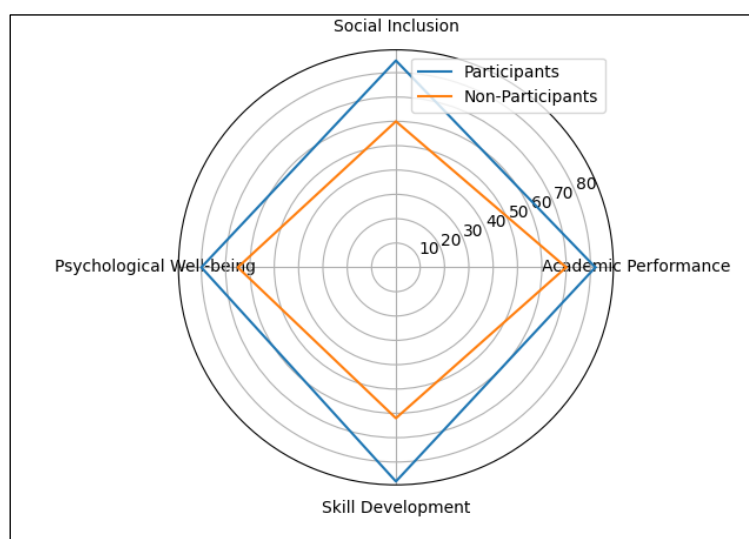


Figure 2. Comparative Analysis

Figure 2 shows that there is a certain performance difference between the participants and non-participants in all the dimensions. The polygon of the participants is bigger, which means that they have better academic performance, social inclusion, and psychological well-being and develop their skills better. Social inclusion and skill development have the most pronounced differences, which testify to the great impact of co-curricular activities on interpersonal and practical competencies. In general, the chart proves that the involvement results in more balanced and holistic development of students.

VII. Discussion

This study concurs with the current literature that emphasizes the significance of co-curricular activities towards the concept of holistic development. This benefits the academic performance, social integration and psychological well-being, which goes to show that co-curricular engagement is an important element of inclusive education. Nevertheless, the fact that we continue

to face barriers implies that inclusion is yet to be well achieved in co-curricular settings. Although there are policies and initiatives, there is inconsistency in their implementation thereby creating differences in participation. The paper highlights the importance of having a systemic approach to address the issue of accessibility, institutional support, and awareness to establish genuinely inclusive spaces. Moreover, the findings accentuate the need to move towards a proactive approach instead of a reactive one in the process of developing co-curricular programs. Barriers should not be considered in the institutions after they occur, but rather inclusive design principles should be embraced at the earliest stage.

VIII. Conclusion

This paper explored how co-curricular activities affect university students with disabilities, in terms of academic achievements, social integration, mental health and development of skills. The results are a clear indication that involvement in co-curricular activities is very important and

transformative in the overall development of students with disabilities. Through the combination of quantitative analysis and qualitative insights, the research will give a holistic view of the advantages along with the issues related to participation. The findings show that students who participate actively in co-curricular activities have better academic performance, time management and motivation as compared to those who do not participate in such activities. In addition to academic benefits, the research also showcases the high impact of co-curricular involvement on social inclusion with the student reporting an improved interaction with their peers, the development of communication skills and a sense of belongingness to the university community. Also, engagement has a positive effect on the psychological well-being building self-confidence, resilience, and emotional stability. The fact that necessary skills like leadership, teamwork, and problem-solving are developed through co-curricular activities further affirms the significance of co-curricular activities as an important element of holistic education.

Along with these positive results, the study also finds a couple of barriers that persistently hinder participation of the students with disabilities. These are physical accessibility issues, absence of assistive technology, institutional support and social stigmas. The results indicate that the students are ready to engage but such obstacles usually interfere with the active and significant engagement. Moreover, institutional differences and the inability to have uniform inclusion models lead to differences in the level of participation. This paper highlights the importance of mediating variables, including peer support, faculty activities, and institutional climate, in increasing the level of participation and results.

An inclusive and supportive environment greatly enhances the chances of active participation, and boosts the benefits of co-curricular activities. This strengthens the need to consider an integrative and a proactive approach to inclusion, where access and participation are considered in the design of co-curricular programs as opposed to being an afterthought.

According to the results, there are a number of implications that can be drawn. Colleges and universities must focus on ensuring that there are inclusive co-curricular models such as enhancing the infrastructure, introducing assistive technology, and training of faculty and staff. Stigma should be minimized by carrying out awareness programs to change the attitude of students towards inclusiveness. Moreover, colleges must create special support systems and mentorship initiatives to motivate the students with disabilities to participate and offer mentorship. Another contribution of the study to the theoretical knowledge is the introduction of conceptual framework, which combines these factors of input, participation processes, mediating variables, and outcome dimensions. This paradigm is a guiding paradigm of institutions to assess and improve their co-curricular practices. It also underscores how participation and development relate to each other, and that they should be constantly improved via feedback processes. Nonetheless, there are limitations to the study. The study is also restricted to a given sample of universities, which could restrict the ability to generalize the research. The use of self-reported data can also create bias as well. Also, the different kinds and the degrees of disabilities could lead to different experiences which cannot be encompassed in the scope of the study.

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