OJED
OPEN JOURNALS IN EDUCATION

Volume 6, Issue 2 (2021), pp. 68-85
International Journal of Multidisciplinary Perspectives in Higher Education
ISSN: 2474-2546 Print/ ISSN: 2474-2554 Online
https://ojed.org/jimphe

Status of Girls' Participation in Higher Education in Nepal

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Abstract

Given that achieving gender equality is a global development agenda, girl's participation in education has been taken as one of the most important indicators. The purpose of this article is to analyze the status of girls' participation in higher education and explore the reasons behind the disparities among them. Similarly, some ways forward to address disparities of the girls' participation are also explored. To analyze the status, the secondary data have been collected from University Grants Commission Nepal (UGC-Nepal). The data are tabulated, analyzed, compared, interpreted and the conclusion is drawn. Similarly, other related documents are consulted and reviewed to make recommendations for achieving gender equality in education. Girls' participation in higher education has increased significantly from nineteen percent to forty-two percent during the thirty years. Though there exist many disparities in different groups, interventions need to start from the school education and access of technical higher education should be expanded in rural areas and to underprivileged groups.

लैङ्गिक समानता हासिल गर्ने विश्वव्यापी विकास लक्ष्य प्राप्तीका लागि शिक्षामा छात्राहरूको सहभागितालाई मुख्य सूचकको रुपमा लिने गरिएको छ । यो लेखमा खासगरी नेपालको उच्च शिक्षामा छात्राहरूको सहभागिताको अवस्था विश्लेषण गरी यसमा रहेका असमानताहरूको खोजी गरिएको छ । यसका साथै उच्च शिक्षामा छात्रा सहभागितामा देखिएको असमानता कम गर्नका लागि अबलम्बन गर्न सकिने केही उपायहरु पनि प्रस्तुत गरिएको छ । विश्वविद्यालय अनुदान आयोगबाट प्रकाशित तथ्याङ्कीय प्रतिवेदनलाई तथ्याङ्कको स्रोतको रुपमा आधार लिएर छात्रा सहभागिताको अवस्था सम्बन्धी अध्ययन गरिएकोछ। आयोगले प्रकाशन गरेको तथ्याङ्कहरूलाई तालिकीकरण, विभिन्न वर्षका बीच तुलना, विश्लेषण र व्याख्या गरिएको छ । यसैगरी

विषयसँग सम्बन्धित अन्य विभिन्न सामग्रीहरूको सहायताले उच्च शिक्षामा लैङ्गिक समानता हासिल गर्ने उपायहरू खोजी गरिएको छ । विगतको तीस वर्षमा उच्च शिक्षामा छात्रा सहभागिता उन्नाइस प्रतिशतबाट बढेर बयालिस पुगेको छ । यद्यपी विभिन्न समूहहरूका बीचमा थुप्रै असमानताहरू विद्यमान छन । छात्राहरूको भर्नादर साधारण विषयहरूमा बढी छ । यस्तो असमानता कम गर्दै प्राविधिक उच्च शिक्षामा समेत छात्रा सहभागिता वृद्धि गर्न विद्यालय शिक्षादेखि नै छात्र र छात्राको समान सहभागिता र सिकाइमा ध्यान दिनुपर्छ । साथै ग्रामीण क्षेत्रमा समेत पहुँचको विस्तार गर्नु आवश्यक देखिन्छ ।

Keywords: Girls' participation, gender, education, equality, empowerment

Introduction

Only the percentage of girls' enrollment is not a sufficient criterion for ensuring gender equality in education. Girls' participation in school education in Nepal is satisfactory as a whole; however, a number of disparities can be seen among the rural-urban, community and institutional schools, provinces (Karnali, Bagmati, and Province two), privileged and underprivileged castes, and Hill and Terai dwellers. Likewise, girls' learning achievement in the School Education Examination-SEE (end of grade X) is very low compared to the boys. The achievement level of SEE determines the subject to study in grade XI. Likewise, subjects studied in grade XI and XII determine the higher education opportunities and enrollment. Students who obtain C+ grade in Mathematics and Science subjects can get enrolled in science stream in grade XI and those who study science in grade XI and XII, can get enrolled in technical higher education and other streams as well. Thus, the girls' participation in technical higher education is quite lower than that of the boys (University Grants Commission Nepal, 2020). It indicates that girls' enrollment in higher education with low levels of academic achievement affects their performance in higher education and the subject studied in higher education affects employability opportunity.

Gender equality is a core development objective of the global society. All-round development of any country is not possible without achieving gender equality in each sector of development like health, education, economic opportunities, earnings, productivity, and representation in governance with voice. The World Development Report 2012 entitled 'Gender Equality and Development' has also stated that economic and social development is not enough to decrease all gender disparities among the different groups, especially the poor, marginalized, disable, disadvantaged, and dwellers of

remote areas (World Bank, 2011). Gender equality impacts not only at the personal and family level but also at society and the global community level. To achieve gender equality and girl's empowerment, education is the most powerful means. But only counting the percentage of a girl's enrollment in education does not transform the real gender equality. Indeed, inclusive and quality education could leverage empowerment in all aspects of gender equality. Empowering the girls in each sector of the society to enhance the individual capability is important (Sen, 1999), which is not possible without the quality education.

The total girls' participation in higher education is about 52 percent in 2018/19 but the participation in technical higher education is only 38 percent (UGC, 2020). The subject of medicine has a high percentage of girl's participation (61%) and agriculture and engineering have low enrollment, i.e. 1.2 % and 2.1% respectively. Subjects studied in higher education can limit or expand job opportunity, income, and empowerment as a whole. The role of education to empower girls and gender equality is multidimensional. Gender equality of education can contribute to multiple areas of women empowerment like more earnings and standards of living, reduction of the rate of child marriage, increase in quality childbearing, fertility and population growth, better health, nutrition and well-being, decision making, social capital, and quality of life (World Bank, 2018). Moreover, the low educational attainment and learning for girls have a negative impact not only on girls but also on the children and household. The purpose of this paper is to ascertain the girls' participation in higher education and gender equality. Specifically, the paper focused on finding out the girls' participation in technical education, gender parity index, and future direction of the girls' education.

Method

This paper is prepared using secondary data published by University Grants Commission-UGC Nepal. It has developed the Higher Education Management Information System (HEMIS) and published the report annually. The researcher has collected the HEMIS report from UGC Nepal website and by visiting the UGC library to find out the additional information and HEMIS which was not in the website. HEMIS data has been categorized, tabulated, summarized, analyzed, interpreted, and described to meet the objectives of this study. The

table and graphs mentioned in this paper are prepared by researchers using the data mentioned in the UGC report. To find out girls' enrollment trends, HEMIS reports, from 2010/11 to 2018/19, were reviewed and analyzed. Similarly, other relevant literature, different universities' websites, journal papers, and documents were also reviewed.

History of Nepali higher education

Increasing the number of higher education institutions in Nepal, the enrollment rate of higher education has also been increased simultaneously. The history of higher education has not been so long in Nepal. It was started along with the establishment of Tri-Chandra College in 1918. About 40 years later, Tribhuvan University was established in 1959 and Nepal Sanskrit University was established after 27 years again in 1986. This indicates that in the span of 70 years, there was slow development of higher education.

The political system of Nepal changed in 1990. Then after the establishment of higher education institutions took rapid pace. There were only two universities in 1990, currently there are eleven universities, six medical academies and 1432 higher education institutions providing higher education in 2020 (UGC Report, 2020). After Nepal entered into the federal political system with seven provinces, opening of new universities and medical academies by the provincial and federal governments is taking place simultaneously. The Gandaki provincial government has established its own university and the Bagmati provincial government is in the process. Federal government has also announced the establishment of new universities in the annual policy of the government. It indicates that the number of higher education institutions, in Nepal, is going to increase in the future.

The girls' participation in higher education has also increased with the higher education institutions. After 29 years of establishment of Tri-Chandra College, only four girls were enrolled in 1947 (Sharma, 2001). Similarly, only two percent of females were literate in the 1950s (National Education Commission, 1992). Now the female literacy rate has reached 65 percent and total girls' enrollment in higher education reached 52 percent (National Planning Commission, 2020; UGC Nepal 2020). The Government of Nepal has implemented various interventions to increase girls' participation in education. Various kinds of scholarships are in place to ensure the

girls' access to education. To participate in higher education, there are no visible obstacles to girls but socio-cultural factors are responsible for it. When the level increases, then the female participation will decrease. So, more females are enrolled in bachelor level than the master's level.

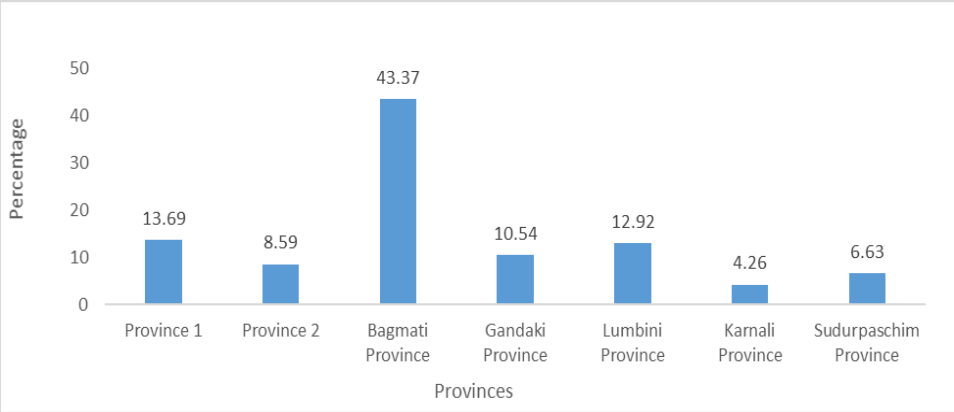
Status of higher education institutions

In Nepal, students start higher education after completing grade XII. Students choose the subject in grade XII as per their interest and the performance in the grade ten examination. The higher education institutions of Nepal offer courses to the students based on their previous study and performance in grade XII. Similarly, the access to higher education institutions all over the country is not equal. Higher education institutions offering technical education like engineering, agriculture, forestry, and medicine are located in the urban areas and institutions located in a rural area offer only general education such as education, management, and social science.

Tribhuvan University (TU) is the oldest university and it has a high number of colleges and students. According to the University Grants Commission Nepal-UGC (2020), out of 1432 higher education campuses, TU has 1141 campuses (80%). Similarly, around 76 percent of students are enrolled in campuses under TU and the rest 24 percent are enrolled in other universities and medical academies.

Most of the higher education institutions are centralized in Bagmati province and urban areas. There is also a trend to establish provincial universities in urban areas. It limits the access to higher education for underprivileged and disadvantaged girls and other people from the rural area. Figure 1 presented below shows the distribution of province-wise higher education institutions in Nepal.

Figure 1: *Province-wise Distribution of Higher Education Institutions*
(Data source: UGC Nepal 2020)



The higher education institutions located in Nepal presented in figure1 shows the significant disparity in the distribution of higher education institutions. Bagmati province has the highest number of HEIs, whereas Karnali province has the lowest. Karnali and Sudurpaschim have more rural areas and a low level of human development index. Similarly, poorer and underprivileged people live in those provinces and province two as well. Most of the HEIs in these provinces provide general education. The distribution itself creates gender inequality in access and then in quality. There are three types of higher education institutions, providing higher education in Nepal like constituent, private, and community. Private (privately funded for-profit) institutions are more expensive than community and the community campuses are more expensive than constituents. Only 10.27 percent of HEI's are constituent and 52.16 percent of them are private. Again, more (170 out of 538) community campuses are in the Bagmati province. Private campuses are located in urban areas providing better higher education than communities located in rural areas. The unequal distribution of HEIs has historically existed and the HEIs are focused only on the people who live in urban areas with high socio-economic status (National Education Commission Report,1992, 2018). The HEIs distribution has created inequality to the access in higher education.

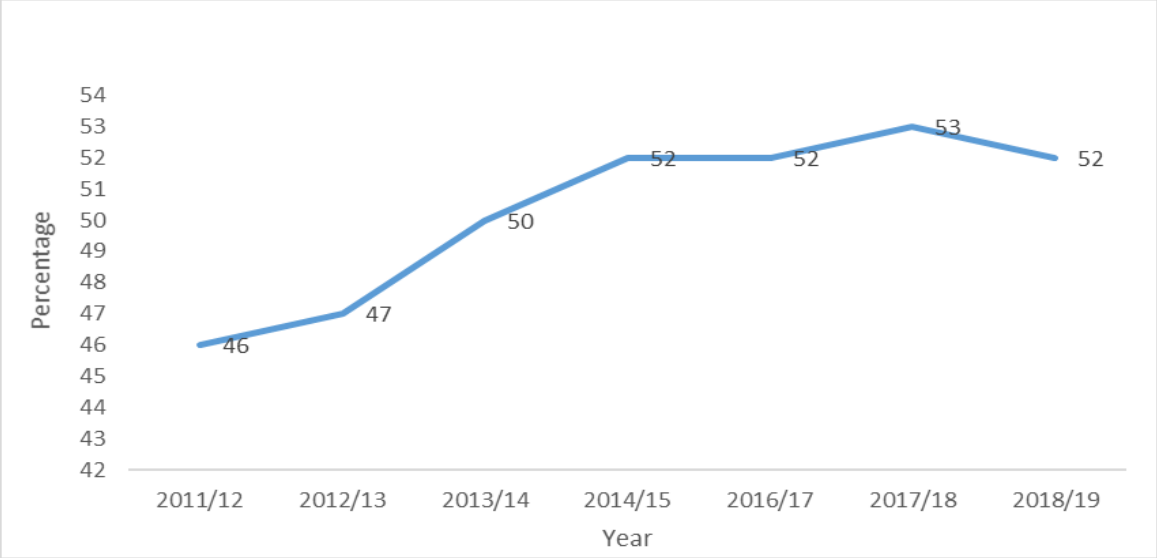
Findings

The findings are presented in tables and charts. Based on the data tabulation, summary and analysis, interpretation has been also included. In-depth analysis is presented under the discussion section.

Status of girl's enrollment

Girls' enrollment trend in higher education changed over time. According to the National Education Commission (1992), the girls' enrolment was 23.34 percent in higher education out of 91826 students. In the academic year 2018/19, the overall girls' enrollment in higher education in Nepal was about 52 percent (UGC Report, 2018/19). The enrollment rate in the different subjects in higher education has not changed significantly over the eight years. Female participation in higher education as a whole, has significantly increased over the years. In the year 2011/12, there were 46% of females studying higher education and in the year 2018/19, it was 52% in total. The enrollment rate seems to be increasing only in general subjects but not in technical subjects compared to boys. Reviewing the historical data, it appears that female participation has increased. The increasing trend is presented in figure 2 below.

Figure 2: *Girls Enrollment Trends in Higher Education*



(Data Source: UGC Nepal)

The figure 2 presents girls' enrollment in higher education, which has increased significantly up to 2015, then it seems constant. According to the UGC Report (2010), female enrolment has sharply increased from 19 percent to 42 by 1980 to 2010. From the last five years, girls' share in higher education is more than fifty percent. But the trend in the different subject groups varies. The subject-wise enrollment of girls is presented in table 1 below.

Table 1: *Girls' participation in Different Faculties in Higher Education in Nepal*

Faculty	2011/12		2018/19	
	Female percentage in total	Female percentage in faculty	Female percentage in total	Female percentage in faculty
Education	38.6	51.4	21.1	63.7
Management	30.4	45.1	49.9	56.0
Humanities & Social Science	19.7	44.5	10.7	50.8
Engineering	2.4	21.7	2.1	16.9
Science & Technology	2.5	26.4	5.8	36.1
Medicine	5.6	56.1	7.6	61.6
Agriculture (Forestry and Animal Science)	0.1	13.4	1.2	37.5
Others (Law, Buddhism, & Sanskrit)	0.6	21.9	1.7	35.2

(Data source: UGC, Report 2020)

According to table 1, the girls' participation has changed into the faculty. In the academic year 2011/12, the highest percentage of girls was enrolled in education. In the academic year 2018/19, it declined from 38 % to 21% in education and increased by 20 percent in management. Similarly, in subjects such as humanities and social science, the girls' participation also declined by 10 percent. While the total enrollment of girls in higher education has increased, it is not equal in each faculty. But the concern is that only changing the pattern and enrollment ratio in general and technical education has not significantly changed.

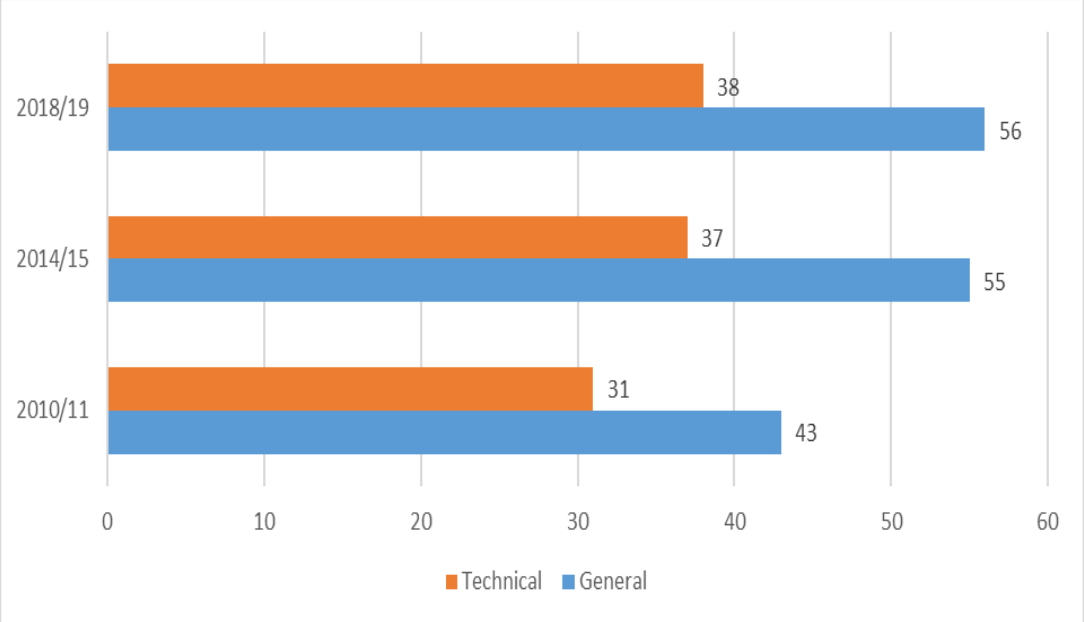
Participation in general and technical education

Different subjects teaching in Nepalese higher education institutions are mainly divided into two groups; general and technical education. The general education incorporates management, education, humanities, and social sciences, law, Sanskrit, and Buddhism. Similarly, technical education includes science and technology, engineering, medicine, forestry, agriculture, and ayurveda. General education is mainly designed to lead participants to a deeper understanding of a subject or group of subjects. Successful completion of these programs may or may not provide the participants

with a labor market-relevant to their academic qualification. Education Commission Report (2018) stated that lack of the specific skills in general education the higher education produces a group of unemployable graduates. Technical education is mainly designed to lead participants to acquire practical knowledge and skills. Successful completion of such programs leads to a job market relevant to their vocational qualification (University Grants Commission, 2019). In general, technical education is only available in city areas and it is expensive in comparison to general education. Similarly, to get admission in technical education, students should pass the entrance exam and get a certain score at the end of school education. However, in general education, there is no entrance exam and strict criteria.

Technical education is job market-oriented and it has a high probability to get employment opportunities. The girls' participation in technical education is low compared to general education. Figure 3 below presents the girls' participation in technical and general education.

Figure 3: *Girls' Participation in General and Technical Education in Nepal*



(Data source: UGC Report, 2020).

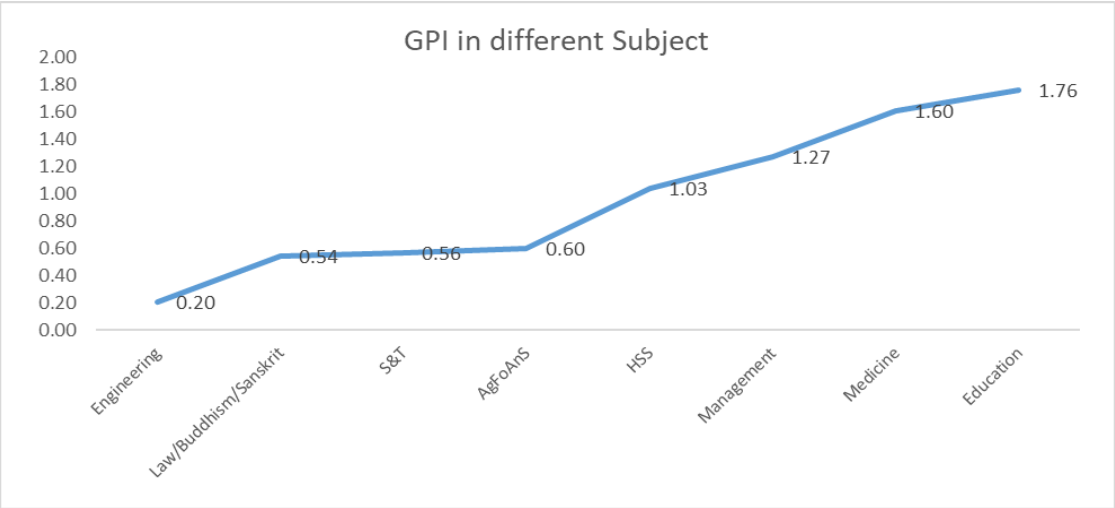
As mentioned before, girls' participation has increased significantly. However, the girls' participation in technical education has not increased. As per the data presented in figure 3, the girls' participation trend has increased in the past nine years in general education by 13 percent and only seven percent in technical education. Participation in technical education mostly covers

medicine, especially nursing, where girls prefer and are encouraged to get enrolled in nursing. In the academic year 2018/19, there was enrollment of 61.56 percent of girls in medicine in contrast to engineering by only 17 percent (UGC, 2020). The data indicates that the girls' participation has increased in general education which has less job opportunity and income as well as long-term empowerment and social justice. According to the data about girls' enrollment in different disciplines only 6 percent of girls enrolled in science and technology and two percent enrolled in engineering which shows that the low level of girls' participation in technical education limits economic empowerment.

Gender Parity Index

Gender Parity Index (GPI) is the most important indicator used to measure the participation of girls in education. GPI is a ratio of male and female students obtained by dividing the number of females over the number of males at a certain level of education (Tienxhi, 2017). GPI value 1 indicates parity between sexes. GPI less than 1 indicates a disparity in favor of boys and greater than 1 indicates a disparity in favor of girls. According to UNESCO (2012a), a GPI ratio 0.97-1.03 indicates that gender parity has been achieved. In 2018/19, the GPI in higher education in Nepal is 1.09, which indicates that enrollment of girls is higher than the boys. The girls' enrollment is higher in only Bachelor and Post Graduate Diploma levels. While the education level increases, the GPI value seems to be decreasing, whereas the highest GPI in Bachelor level is 1.15. The figure 4 below presents the GPI in different subjects in the year 2018/19.

Figure 4: *Gender Parity Index in Different Subject in Nepali Higher Education*



(Data source: UGC Report, 2020)

As shown in figure 4, the faculty of education has the highest GPI, i.e. 1.76, whereas engineering has the lowest, i.e. 0.20. As categorized in general and technical subjects, medicine has higher GPI than others, but it is the effect of nursing courses.

Similarly, community campuses have higher value of GPI (1.83) than private and constituent campuses. Constituent campuses offering higher education at low cost and located in urban areas have the lowest GPI of 0.80. Total GPI 1.09 could not show the real disparity among the different social dimensions.

Discussions and implication

Only enrollment is not sufficient for the girls' education initiative and equality. Despite the overall progress in the data of the enrollment, the girls remain lower than the boys of the underprivileged and disadvantaged population, particularly in province two, Karnali and Sudurpaschim. As mentioned in the Education Commission Report 2018, there is a huge gap in enrolment between rich family women and poor family women. The report further elaborated the girls' enrollment of different groups like 69 percent of the girls' from Bhramin and Chettri, 12 percent from Newar, 14 percent from ethnic, one percent Dalit, and four percent Madhesi. It indicates that the disparities among different groups reveal other social disparities in terms of social, economic, political and so on.

The World Development Report (2012) mentioned that greater gender equality should remove the barriers that prevent girls from schooling and learning (World Bank, 2011). Equal access is one prerequisite condition for girls' participation in education. However, the learning disparity in secondary education has been hindering the

higher education opportunity for girls. Gender friendly environment, unbiased teaching-learning materials, equal learning opportunity, and gender-friendly teaching-learning activities could contribute to the quality of the education. Stereotypical behavior of the society like girls are other's property, educating the girls takes benefit from the next family, society is not ready to provide better education to girls in school and higher education. The trend of sending boys to private schools and girls to community schools has been hindering enrollment in technical higher education.

A low level of learning achievement of girls has posed multiple negative impacts not only to enroll them in technical higher education but also to decline their self-confidence. While the girls' achievement is poor, then the family pushes them for early marriage rather than providing education. Bista (2004) argued that 'parents intend to marry them off early to avoid the extra economic burden and perceive only dubious advantages from educating girls (p.7).' Low achievement in school education is also a factor contributing to the prevalence of early marriage in the rural areas. This is the grim reality in the rural areas. Higher education institutions, offering general subjects, particularly education, are located in the rural areas. The faculty of education has no strict criteria to enroll the students, so more married girls are enrolled in this discipline in the rural areas. One campus, offering higher education in rural areas of province 2, has twelve married females out of 17 enrolled in graduate courses (Shilapatra, 2019). This is one positive aspect of the higher education institutions located in the rural areas. But a pertinent question arises here: why are those girls studying education more than other subjects?

Gender equality in education is not only the matter of girls' empowerment but also the matter of social justice and human rights. Better education is vital for achieving a peaceful, inclusive, resilient, and protective environment. Gender equality is measured by Gender Parity Index. Nepal has achieved equal GPI in school and Higher education. However, UNESCO (2016) argued that achieving gender parity in education does not necessarily translate into gender equality in economic activities and employment opportunities. So, higher education provides equal opportunity to girls and boys for decent work. Counting the number and percentage is not sufficient for girls' education and equality. The most important aspects are equal learning opportunities, equal access to decent work, employability, income, decision-making role, representation in government, and other

political, social, and economic activities. Acharya (2007) argued that education itself reproduces the discriminatory attitudes and practice of the wider society; resulting in greater risk of drop-out and non-completion of education and low level of learning. The remarks of the author point out the social disparity faced by underprivileged students, particularly girls. In this regard, educational organizations should be sensible to create a gender-friendly teaching-learning environment. To this end, providing equal learning opportunities can contribute to ensure better higher education.

Formal education of good quality equips individuals with skills and knowledge to become more productive (UNESCO, 2016). Only the enrollment percentage and GPI value is not sufficient for gender equality and empowerment. As mentioned by Acharya (2007), addressing equity in access and equity in quality are complex to achieve. Existing programs and policies are not sufficient for addressing the vulnerable and excluded groups. It requires special attention and context-specific intervention. Gender equality should be translated into employability, income, meaningful participation in governance, and a gender-friendly society.

Gender equality in education is also linked to the right to education and important means of improving other social and economic outcomes (UNESCO, 2012b). Similarly, achieving gender equality requires an approach that ‘ensures that girls and boys, women and men not only gain access to and complete the education cycles, but are empowered equally in and through education (UNESCO, 2016). It is necessary to remember that there is no inherent difference in the capacities to learn by boys and girls but the learning environment in school and society contributes to creating the learning gap. To increase the girls' participation in technical higher education, the learning achievement of girls in secondary education should be improved. Similarly, the establishment of higher education institutions, offering technical education in rural areas at low cost, can attract the girls towards it. Among the three types of higher education institutions, almost 80 percent of constituent campuses are located in the city areas. Private higher education institutions that charge more fees and provide better learning opportunities are also located in the urban areas. Community campuses located in rural areas offering general education have a lower graduation rate than the private campus located in urban areas. Disparities between the graduation rate of private and constituent campuses and their location have

created gender inequality. The graduation rate has also shown the disparities. Girls are enrolled in faculty of education more but the graduation rate is very low, i.e. 16 percent. This is an indication of the disparities in learning.

Girls in technical education

Hu (2020) mentioned the percentage of women researchers in software development and artificial intelligence research as six and twelve respectively. Only six percent of the girls are studying science and technology in Nepal 2020 (UGC, 2020). Trusz (2020) claimed that females prefer humanities/social studies and males prefer science and technology. It seems to have become a global issue. Trusz (2020) further stated that teachers' expectancies regarding female students' achievement in mathematics and their own self concept of abilities predict choosing science and technology for the future career. Time span on learning has also been an affecting factor in the achievement and it correlates to the subject selection for the study. Hu (2020) further elaborated the issue of female participation in science and technology stating the disparity in the field being male-centric, thereby promotes gender discrimination and inequality. Trusz (2020) elaborated the consequences of the subject selection by boys and girls "translates into eventual outcomes on the market in terms of employment opportunities, matched to their satisfactory earning (p. 635)". So many social, cultural, economic and political factors influence the gender discrimination and biases in society. Girls spend more time in household chores than boys in the Nepalese context because the social belief system is that boys can go outside for income, whereas girls should remain at home. This disempowering social practice has discouraged girls from getting enrolled and continuing their education.

The UNESCO Institute of Statistics (2017) estimates that globally only 35 percent of women are involved in science, technology, and innovation. Similarly, McCarthy (2015) explored the linkage between gender difference in learning achievement and female participation in science, technology, engineering and mathematics. The percentage of female teachers in schools and involvement of women in the field of science and technology somehow influence the orientation of the selection of the subject in school and higher education. The higher level of learning achievement contributes to developing self-confidence. Sen (1999)

stresses that human capability is also influenced by girls' empowerment. True empowerment comes from the opportunity for decent work and income opportunities.

To achieve the global aspiration of greater gender equality in every sector of the state and society, the entire education system needs to be flexible and inclusive so as to ensure equal learning opportunity. Without addressing the complex dynamics of social, economic, and political exclusion and gender discrimination, it is rather tough to create a gender-friendly global society. In a similar vein, Lockheed (2010) further stated the relevancy of the school, curriculum, and quality learning support to social mobility for the excluded girls. In order to provide equal learning opportunities, different learning modalities and empowering education systems should be developed and implemented.

Way forward

Gender Parity Index of higher education indicates that the enrollment of girls is higher than that of boys but many forms of disparities exist there. To achieve gender equality in every sector of the society, it is necessary to reduce the disparities between different academic groups. To increase the girls' participation in technical subjects, it is important to expand the opportunity to get better employability opportunities and higher income. Several efforts are made and programs are implemented for ensuring the girls' participation and their empowerment. Even if there is no such discrimination from the legal perspective, but the social, cultural, economic, political factors play a role in limiting the girls' empowerment in many facets. So technical education should be available in the rural areas at low cost in order to enhance learning achievement and provide equal learning opportunities. Availability of resources and equipment can stimulate the interest in technical education, so the opportunity to get exposure to technical education should be made available. Classroom teaching-learning activities should be gender friendly by teacher. Teaching learning materials should be developed targeting the girls' motivation to learn. Hostel and required stipend should be made available based on priority to marginalized and disadvantaged groups. McCarthy (2015) suggested that career counselling and mentoring opportunities should be expanded, and gender responsive teaching strategy, and resource materials should be available in schools. Gender-friendly physical infrastructure, gender-friendly teacher behavior, gender

responsive curriculum and content are the essential components in the educational institutions. Targeted interventions should be implemented for marginalized and disadvantaged girls to promote gender equality and access to education.

Conclusions

Decades of advocacy, policy work, law reform, investment, and other targeted interventions have brought about a substantial achievement in girls' enrollment at both school and higher level of education in Nepal. There are still several disparities pertaining to enrollment and learning. Multiple reasons such as high rate of poverty, socio-cultural belief system, gender-based violence, geographical location, minority, and disability are the key obstacles for the girls to get quality education. To achieve the goals of gender equality in every sector, a gender-disaggregated data system should be developed and implemented. Girls' participation in science and technology is not only the issue of Nepal, it is also a global issue. Promoting the quality of the community campus and community school can reduce the disparity to some extent. So, targeted interventions and equitable learning opportunities are necessary to achieve gender equality.

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