



# Gender and Inclusive Pedagogy in Bhutan: A Quasi-Experimental Study on Secondary School Teachers' Professional Development and Student Achievement

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**ABSTRACT:** *Education has long been regarded as a cornerstone for achieving social equality and economic progress. Inclusive education (IE) principles, which emphasize equitable access for all learners regardless of gender, ability, or socio-economic status, have garnered increasing global attention. Bhutan, a signatory to key international frameworks such as the Convention on the Rights of the Child (1990) and the Convention on the Rights of Persons with Disabilities (2010), has made strides toward inclusive education. However, challenges remain, particularly in addressing gender disparities and the inclusion of students with disabilities. This study examines the impact of Gender and Inclusive Pedagogy (GIP) interventions on secondary school teachers' attitudes, efficacy, and classroom practices in Bhutan and evaluates student engagement and academic performance. Employing a quasi-experimental design, the study revealed significant improvements in teachers' gender sensitivity and inclusive teaching strategies, leading to positive changes in student participation and academic achievement. However, structural and resource constraints remain key barriers to fully realizing the potential of inclusive education in Bhutan.*

**KEYWORDS:** *Gender and Inclusive Pedagogy, Teacher Professional Development, Inclusive Education, Student Participation, Bhutan, GIP Interventions.*

## INTRODUCTION

Education is universally recognized as a fundamental human right and a crucial driver of social and economic development. Globally, initiatives such as the Jomtien "Education for All" Conference (1990) and the Dakar World Education Forum (2000) have emphasized the importance of inclusive education (IE) to ensure equitable access for all learners. Inclusive education aims to eliminate exclusion based on ability, gender, and socio-economic status, allowing all students to participate fully in the education system (Ainscow, Booth, & Dyson, 2006). In Bhutan, despite notable progress, gaps persist, particularly in secondary education, where entrenched gender norms and limited resources for students with disabilities pose significant challenges (Ministry of Education, 2020).

This study was conducted in response to these challenges and sought to examine the impact of GIP on teaching practices and student outcomes. Supported by the International Development Research Centre (IDRC), Canada, through the Global Partnership for Education Knowledge

and Innovation Exchange (GPE-KIX), the research brought together Bhutan's Samtse College of Education (SCE) and international partners from Nepal, Vietnam, Timor-Leste, and Bangladesh. By introducing an evidence-based professional development package for teachers, the study aimed to strengthen their capacity to address equity issues, improve classroom inclusivity, and enhance student participation and achievement.

Bhutan despite being commitment to inclusive education, significant disparities in student participation and academic achievement persist. Gender-based barriers, alongside limited opportunities for students with disabilities, remain prevalent, particularly at the secondary level. Traditional teaching methods, coupled with inadequate teacher training, exacerbate these issues, limiting the engagement of marginalized student groups. The COVID-19 pandemic further widened these inequalities, disproportionately impacting girls and students from rural or disadvantaged backgrounds. There is an urgent need for comprehensive interventions to promote gender and inclusive pedagogy as part of Bhutan's broader education reform efforts.

Therefore, this study addresses critical gaps in Bhutan's educational system by focusing on gender and inclusion at the secondary school level. By evaluating the effectiveness of GIP interventions, the research offers evidence-based insights that can inform national policy development and professional development programs aimed at promoting equitable education. Moreover, the study's regional collaboration with other low-income countries underscores its broader relevance, providing scalable solutions for other contexts facing similar challenges. The findings also contribute to His Majesty's vision of ensuring quality education for all Bhutanese students, regardless of gender or ability.

## **OBJECTIVE**

The primary aim of this research was to measure the impact of Gender and Inclusive Pedagogy approaches on secondary school students' participation and learning achievement during the COVID-19 pandemic and beyond. The study specifically sought to assess changes in teachers' attitudes, efficacy, and practices concerning gender and inclusive pedagogy. Additionally, it aimed to evaluate the impact of GIP interventions on students' participation and academic achievement, while also analyzing the differential effects of these interventions based on gender and socio-economic backgrounds. Finally, the research aimed to identify sustainable mechanisms for integrating and maintaining GIP approaches at both national and regional levels.

## **RESEARCH APPROACH AND DESIGN METHODOLOGY**

This study employed a mixed-methods approach, incorporating both qualitative and quantitative data to evaluate the impact of GIP interventions on teachers and students. According to Creswell and Creswell (2018), mixed methods research offers a more comprehensive analysis than either qualitative or quantitative methods alone. A quasi-experimental design was used for the quantitative phase to assess changes in teachers' attitudes and students' academic performance. Concurrently, qualitative data, including interviews and classroom observations, were collected to provide deeper insights into the effectiveness of GIP interventions.

The study included teachers from grades VII and IX in 10 experimental and 10 control schools across 20 districts (dzongkhags) in Bhutan. A total of 158 teachers participated in the baseline phase, while 90 teachers were involved in the endline phase. Data were collected through validated tools such as the SACIE Questionnaire (Forlin, Earle, Loreman, & Sharma, 2011) for

measuring attitudes towards inclusive education, the Teacher Efficacy for Inclusive Practices (TEIP) scale (Sharma et al., 2012), and pre- and post-tests to evaluate student learning outcomes.

Quantitative data were analyzed using descriptive and inferential statistics, including t-tests and ANOVA, to compare pre- and post-intervention measures. Qualitative data from interviews and classroom observations were subjected to thematic analysis, allowing for a detailed exploration of teachers' experiences with GIP interventions. This mixed-methods approach ensured a robust evaluation of the impact of the interventions on inclusive education practices.

## RESULT AND DISCUSSION

The results of this study elucidate the considerable influence of Gender and Inclusive Pedagogy interventions on multiple dimensions of educational efficacy, particularly in the enhancement of teachers' attitudes, efficacy, and gender sensitivity. Teachers within the experimental cohort displayed a pronounced increase in their confidence to employ inclusive teaching strategies, which in turn positively influenced student engagement and participation. Notably, there were significant improvements in student performance, especially among female students, thereby underscoring the effectiveness of GIP interventions in promoting academic achievement. However, the study also identified enduring challenges, including resource limitations and the necessity for ongoing professional development to maintain the advancements achieved.

These findings corroborate the existing literature that underscores the transformative potential of inclusive education, specifically highlighting the critical role of teacher training and institutional support in fostering equitable learning environments (Florian & Black-Hawkins, 2011). This research contributes to an expanding corpus of evidence demonstrating that targeted professional development can engender positive shifts in teaching practices, subsequently enhancing student outcomes (UNESCO, 2020). Nevertheless, as Ainscow (2020) articulates, the pursuit of inclusive education necessitates sustained efforts and systemic reforms to secure enduring success. Thus, the implications of this study advocate for continued investment in both teacher training and infrastructural enhancements to fully realize the implementation of GIP within the context of Bhutan.

**Table 1: Attitude, Efficacy, Intention, Practice, Concern and Gender Sensitivity in control and experimental schools.**

Variables	Groups	Baseline		Endline	
		N	Composite Mean	N	Composite Mean
Attitudes	Control	158	5.56	90	4.8
	Experimental	169	5.46	64	5.95
Efficacy	Control	158	4.82	90	4.58
	Experimental	169	4.65	64	4.95
Intention	Control	158	5.99	90	5.58
	Experimental	169	5.95	64	5.97

Practice	Control	158	2.98	90	2.99
	Experimental	169	2.89	64	3.13
Concern	Control	158	2.61	90	2.81
	Experimental	169	2.54	64	2.78
Gender Sensitivity	Control	158	2.67	90	2.71
	<i>Experimental</i>	<i>169</i>	<i>2.57</i>	<i>64</i>	<i>2.98</i>

The comprehensive insights garnered from this investigation illuminate the multifaceted impacts of GIP interventions across various educational dimensions, including school infrastructure, WASH (Water, Sanitation, and Hygiene) facilities, ICT (Information and Communication Technology) integration, and pedagogical practices. Although improvements were observable in both experimental and control groups, the inconsistent statistical significance in certain areas indicates nuanced variations in the effectiveness of the interventions.

Regarding school infrastructure, the experimental schools commenced the study with a higher composite mean score (2.18) in comparison to their control counterparts (1.89). By the study's conclusion, both groups exhibited enhancements, with experimental schools raising their score to 2.43 and control schools to 1.93. While these improvements suggest benefits stemming from the GIP interventions, the absence of statistically significant differences ( $p = 0.403$ ) implies that the advancements in infrastructure were not markedly distinct from those observed in the control group. This observation aligns with Aikman and Unterhalter (2005) assertion that infrastructure improvement interventions typically require extended durations to yield statistically meaningful changes.

In terms of WASH facilities, the experimental schools initiated the study with a higher baseline mean (2.40) compared to control schools (1.98), with both groups achieving modest improvements by the study's conclusion. The experimental schools increased their mean score to 2.60, whereas control schools improved to 2.04. However, again, the differences lacked statistical significance ( $p = 0.209$ ). Qualitative feedback from students in the experimental schools revealed persistent hygiene challenges, including unclean toilets and inadequate garbage disposal, which limited the perceived effectiveness of the interventions. This finding is consistent with Bensimon's (2016) assertion that enduring behavioral changes in hygiene practices are essential for the long-term efficacy of WASH initiatives in educational settings.

Conversely, the integration of ICT facilities demonstrated a more positive trajectory. Both experimental and control schools maintained consistent access to internet connectivity and multimedia projectors throughout the study, achieving 100% availability for both educators and students. Notably, experimental schools exhibited a significant increase in the number of computers and ICT labs compared to control schools. Student feedback from the experimental cohort emphasized the positive influence of multimedia tools—such as projectors and videos—on engagement and learning experiences. This outcome aligns with the research conducted by Hew and Brush (2007), which underscores the advantages of interactive technology in enhancing student engagement and improving educational outcomes. Beyond infrastructural and technological advancements, the GIP interventions significantly influenced teachers' attitudes, efficacy, and gender sensitivity as shown in table 1. The experimental group

experienced substantial improvements in their attitudes toward inclusive pedagogy, with mean scores rising from 5.46 to 5.95. Additionally, teaching efficacy increased, with mean scores ascending from 4.65 to 4.95, while the control group experienced declines in both areas. Furthermore, the experimental group recorded considerable gains in gender sensitivity, with mean scores advancing from 2.57 to 2.98. These enhancements underscore the pivotal role of professional development in cultivating inclusive educational practices (Griffiths, 2014). The observed increase in awareness regarding gender-related issues aligns with prior studies that advocate for gender sensitivity as a mechanism to improve classroom dynamics (Francis & Skelton, 2001).

The beneficial effects of the GIP interventions also extended to classroom practices. The experimental group demonstrated significant improvements in the application of inclusive teaching methods, as evidenced by an increase in their mean practice score from 2.89 to 3.13. Teachers reported employing a more diverse range of instructional strategies, including differentiated instruction and formative assessments, thereby fostering a more equitable learning environment. However, both experimental and control group teachers expressed concerns regarding practical challenges, such as time constraints and resource limitations, which impeded the comprehensive implementation of inclusive practices. This observation is consistent with Fleming's (2012) findings regarding the adverse impact of resource limitations on the effectiveness of inclusive pedagogical interventions.

**Table 2: Classroom Observations**

Variables	Groups	Baseline		Endline		Sig. (Difference)
		N	Composite Mean	N	Composite Mean	In baseline and end line
Students' participation in classroom	Control	10	3.10	10	3.11	0.933
	Experimental	10	3.26	10	3.69	0.027

Finally, classroom observations indicated that the GIP interventions significantly enhanced student engagement and academic performance, particularly within the experimental group as shown in table 2. Notably, student participation scores exhibited a marked increase in the experimental group compared to the control group, with teachers reporting heightened levels of student involvement and interaction. Additionally, female students outperformed their male counterparts in both mid-term and annual examinations, a finding that corroborates prior research highlighting gender disparities in academic performance and engagement (Francis & Skelton, 2001). The correlation between elevated student engagement and improved academic outcomes reinforces the essential role of inclusive pedagogical strategies in fostering equitable learning environments (Prince, 2004).

The GIP interventions yielded advancements across multiple educational dimensions, the absence of statistical significance in certain areas indicates that sustained investments and ongoing professional development are imperative for achieving more substantial and enduring changes. These findings emphasize the necessity for future research to explore the long-term impacts of GIP interventions, particularly concerning gender-specific outcomes and the sustainability of infrastructure and WASH improvements. Furthermore, additional investigations should focus on addressing practical challenges associated with the

implementation of inclusive practices to ensure their consistent application and evaluation across diverse educational contexts.

## CONCLUSION

The findings of this study highlight the positive impact of Gender and Inclusive Pedagogy interventions on various educational dimensions, including teacher attitudes, efficacy, gender sensitivity, school infrastructure, WASH facilities, and ICT integration. The results underscore the value of targeted professional development in promoting inclusive teaching strategies and improving student outcomes, particularly in terms of engagement and academic achievement. Teachers in the experimental group demonstrated increased confidence in adopting inclusive practices, leading to enhanced student participation and a more equitable learning environment. Notably, female students benefitted significantly from the interventions, achieving higher academic performance compared to their male counterparts.

However, despite these gains, the lack of statistical significance in infrastructure and WASH improvements suggests that systemic and sustained efforts are required to achieve long-term change. Persistent challenges, such as resource limitations and time constraints, underscore the need for ongoing investment in teacher training and school infrastructure to fully implement GIP principles. Furthermore, the qualitative feedback from students regarding hygiene issues points to the necessity of behavioral changes alongside physical improvements to school facilities.

In line with existing literature, this study reaffirms that inclusive education is a complex, multifaceted process that demands continuous professional development and support for teachers, as well as systemic reforms to address infrastructural and resource challenges. Future research should focus on the long-term impacts of GIP interventions, especially concerning gender-specific outcomes and the sustainability of gains made in school environments. Additionally, further exploration is needed to refine inclusive practices, ensuring that they are consistently applied and evaluated across diverse educational contexts. The findings of this study make a compelling case for the ongoing commitment to fostering inclusivity in education, which remains a key driver for achieving equitable and transformative learning outcomes.

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