

# EXPLORING THE TEACHERS' PERCEPTION TOWARDS EDUCATIONAL INCLUSION: A STUDY OF TEACHERS' IN PUNE, INDIA

Ambuj Sharma<sup>1</sup>✉  
Reena Malik<sup>2</sup>  
Henrietta Nagy<sup>3</sup>

<sup>1</sup>Govind Ballabh Pant Social Science Institute, Jhusi, Allahabad, India

<sup>2</sup>Chitkara Business School, Chitkara University, India

<sup>3</sup>Kodolanyi Janos University, Hungary

✉ [ambujrc@hotmail.com](mailto:ambujrc@hotmail.com)

## ABSTRACT

In India, changes in legislation and policy have increased the number of students with disabilities enrolled in higher education. The purpose of this study was to investigate university teachers' perceptions towards inclusion of students with disability public and private universities in India. The study examined how age, gender, educational levels, years of teaching experience, and frequency of interaction with a person with a disability influence instructors' views about people with disabilities and their inclusion at public and private academic institutions. Data was collected through a digital questionnaire from private and public universities in Pune, India. The population of the study comprised of full time University teachers' (under-graduate, post-graduate and doctoral courses) in Pune. The survey was completed by 309 university teachers. Descriptive statistics, independent sample *t*-test and ANOVA were used to examine the data. The researchers found no statistically significant relationships between teachers' perceptions of inclusion in regards to degree level, gender and years of experience. The study did, however, discover a statistically significant relationship between teachers' perceptions of inclusion and their interaction with students with disabilities. Academic and social outcomes of students with disabilities are significantly enhanced when inclusive approaches are used. Goals for future research are discussed.

## KEYWORDS

**Inclusive education, India, students with disabilities, teacher, university**

## HOW TO CITE

Sharma A., Malik R., Nagy H. (2022) 'Exploring the Teachers' Perception towards Educational Inclusion: A Study of Teachers' in Pune, India', *Journal on Efficiency and Responsibility in Education and Science*, vol. 15, no. 1, pp. 23-32. <http://dx.doi.org/10.7160/eriesj.2022.150103>

## Article history

**Received**

July 23, 2021

**Received in revised form**

October 18, 2021

**Accepted**

February 28, 2022

**Available on-line**

March 22, 2022

## Highlights

- *In this research, teachers' opinions of inclusion were shown to be unaffected by their degree level or years of experience in this study.*
- *Male teachers are more positive towards inclusion of students with disabilities than female teachers.*

## INTRODUCTION

The right to education is a crucial component of ensuring equal rights and academic inclusion for children with disabilities. In India, Equal Opportunities Protection of Rights and Full Participation Act (1995) defines "Person with Disability" (PWDs) as any person that is suffering from at least 40 % of disability and is certified by a medical authority for the same (Ministry of Law, Justice and Company Affairs, 1996: 248). The following types of disabilities and their definitions are specified in Section 2 of the above-mentioned Act-1995: blindness, person with low visibility, Leprosy-cured person, hearing impairment, locomotion related disability, mental illness, and mental retardation.

At global front, The United Nations Convention on the Rights of Persons with Disabilities is an international human rights treaty aimed at protecting the rights and equality of people with disabilities. United Nations 17 Sustainable Development Goals recognizes 'quality education' as an instrument for world peace and prosperity, and expects a strong commitment by all stakeholders (from developing and developed countries) to provide education for all boys and girls (United Nations, n. d.). The Indian government has been working to close the gaps in their education system in order to create a strong system of inclusive education in the country. The statute must be interpreted in connection with Chapter V of the Persons with Disabilities

Act, 1995, when it comes to schooling for a disabled kid. Every child with a disability has the right to a free education until they reach the age of eighteen, according to Chapter V of the PWD Act (Singh, 2016). Importantly, every child with special needs (CWSN), regardless of the kind, category, or severity of their disability, is entitled to a meaningful and high-quality education under The Right of Children to Free and Compulsory Education (RTE) Act, 2009 (Bose, Ghosh and Sardana, 2017). The Rights of Persons with Disabilities (RPwD) Act 2016 defines inclusive education as a 'system of education wherein students with and without disabilities learn together and the system of teaching and learning is suitably adapted to meet the learning needs of different types of students with disabilities' (Ministry of Human Resource, 2020: 26). The National Education Policy 2020 (NEP) of India has been hailed as a major milestone in instructional leadership. One of the National Education Policy's 2020 goals is to ensure the inclusion and fair representation of children with disabilities in India's educational system. From the foundational stage to higher education, children with disabilities will be able to completely engage in the normal schooling process. This proposed legislation is fully compliant with the requirements of the RPwD Act 2016 and promotes all of its provisions for school education.

While inclusion is still commonly followed in India's education system, teaching and non-teaching employees are unaware of how important it is for them to be aware of an inclusive academic atmosphere. Sarkar (2020) examined the National Education Policy 2020 (NEP) implications for children with disabilities about choice of school- special, regular, or home-based education. It was children with disabilities may be enrolled in neighbourhood schools under the 2012 RTE amendment, which also acknowledges a separate category of children with severe disabilities who may choose home-based education. The RPwD (2016), on the other hand, recognises that children with developmental disabilities have the right to attend either neighbourhood or special schools of their choice. While a range of policies have been developed and adopted to solve problems relating to education for individuals with disabilities, these strategies are insufficient, and all of these interventions must be scaled up. Unless the nature of their impairment precludes them from being appropriately served in a general education classroom setting, students with disabilities should get their education in a general education classroom setting.

In India, the survey of persons with disabilities (National Sample Survey 76<sup>th</sup> round in 2018) conducted in rural and urban households, reported that among persons with disabilities of age 15 years and above, 19.3% had highest educational level as secondary and above (Ministry of Statistics & Programme Implementation, 2019: 1). A total of 106 894 people with disabilities were surveyed in this study (74 946 in rural areas and 31 948 in urban areas). The report also suggested that 62.9% of individuals with disabilities (aged 3 to 35 years) have never attended a regular school. There are just 8 449 students with disabilities among the 1 521 438 students enrolled in 150 colleges and universities across the country, accounting for 0.56% of all students (PTI, 2015). According to the National Center for Promotion of Employment of Disabled Peoples' third edition survey, 74.08% of these were males and 22.7% were females.

One of the most valuable advantages of education is the ability to develop labour market skills of individuals with disabilities to become financially self-sufficient. The exclusion of adolescents with a disability from educational institution is not only a moral and social problem, but it also has a negative impact on national economic development (Banks and Polack, 2014). Phillipa Thomas (2005) in her feature, "Mainstreaming Disability in Development: India Country Report" asserts that poverty is one of the leading factors and effects of disability. There are many social and economic costs associated with disabilities, which differ depending on the individual's situation as well as the form and severity of their condition. A person's disability has not only an effect on the family's way of living, but it also establishes a variety of economic costs in a particular country. A person with disability must pay additional costs to turn an amount of income into a quality of life compared to that of an individual without disability (Raut, Manoranjan and Bharati, 2014). For people with disabilities, education and acquiring new skills are the only way to overcome poverty, register better participation in labour market and make their own space in the society.

The world of knowledge is undergoing scientific and technological transformation, and sizeable shift has been noticed in curriculum bridging the gap between the current state of learning outcomes and what is required must be adaptable, creative and multidisciplinary. It's critical to study national and international studies on regular teachers' attitudes on inclusive education. Regular classrooms should create an environment to cater students from all backgrounds, especially student with disability. Academic inclusion is largely dependent on teacher training, attitude, and reporting of children with special education needs, as well as the instructional tactics employed (Mag, Sinfield and Burns, 2017). The adaptive abilities of classroom teachers are one of the primary turning points in achieving an inclusive school environment. To function in an inclusive classroom, teachers must understand individual disability features, teaching strategies, and personal qualities in order to provide a stimulating learning environment (Bukvić, 2014). Accessible and flexible curriculum can aid students of all capacities in learning content, while also encourage teachers' to change their teaching methods (Imaniah and Fitria, 2018). Apart from equipping teachers with skills, knowledge, and understanding, one of the most difficult aspects of teachers' preparation for inclusive practise is ensuring the development of favourable attitudes toward children with disabilities and their inclusion in regular classes (Forlin, 2010). The National Education Policy (NEP) addresses numerous facets of teachers' education, training, and service conditions that are important for children with disabilities (Sarkar, 2020). Short-term specialist courses for teaching children with disabilities, as well as modules on teaching children with disabilities within current programmes, are among these options. Recognizing the important role teachers may play in improving learning outcomes by reforming pedagogy, the NEP 2020 empowers teachers to choose suitable pedagogy and encourages them to ensure their students' socio-emotional learning, which is an important element of holistic development (Chari, 2020).

Teachers at all levels of academic pyramid must be at the centre of education changes because they are the ones who will mould our next generation of achievers. Teachers in collaboration with governmental organizations are providing high-quality educational opportunities for all students, regardless of their social, bodily or economic circumstances. Faculty attitudes are thought to be one of the most important elements in students with disabilities achieving academic success and completing their university degree (Reynolds and Hitchcock, 2014). Children with disabilities receive a variety of specialised services tailored to their needs during their school years, but the situation changes radically once they enter the university system, where they are expected to be self-determined and advocate for their own needs (Lombardi and Murray, 2011). Although students with disabilities may be provided with accommodations, higher education institutions do not adjust the pedagogical objectives or intellectual stimulation. It's not unexpected that students with disability have a hard time shifting and adjusting to educational settings. Students with disabilities encounter challenges on both ends of the spectrum. Rather than a school, a university is a platform for higher education. Students at the institution concentrate on certain areas, and knowledgeable specialists deliver lectures. From high school to college is a significant step in a student's life, and while there is a short transition period between the two, the student's life changes dramatically. This will also provide significant learning chances for them to become a contributing member of the workforce with the necessary knowledge and abilities. Importantly, while most students attending universities have a smooth transition, students with disabilities having difficulties adjusting to new academic environments. University faculty members are taking all necessary steps to meet the demands of high-quality education by implementing various teaching techniques for students with impairments who are unable to meet the learning obstacles. For example, Students' knowledge of their disability, learning strengths and limitations, career decision-making skills, and preparedness for the higher demands of postsecondary education must all be addressed in transition specific interventions (Janiga and Costenbader, 2002).

According to several surveys, teachers' attitudes for inclusive education vary from one country to another country. For example, teachers' attitudes toward inclusive education are said to be more negative in non-western countries. Many variables continue to influence the attitude (positive, negative or neutral) of teachers in India toward inclusive education progress. Such variables are teachers' age (Kumar and Midha, 2017; Bhatnagar and Das, 2013; Parsuram, 2006), gender (Dash et al., 2019; Kumar and Midha, 2017; Kumar, 2016; Bhatnagar and Das, 2013; Parsuram, 2006), years of experience (Kumar, 2016; Bansal, 2016), qualification (Bansal, 2016; Sharma, Moore and Sonawane, 2009; Parsuram, 2006), and teachers who had a contact with a person with a disability (Parsuram, 2006). Some authors discovered good attitudes about students with impairments (Costea-Barluti and Rusu, 2015; Reynolds and Hitchcock, 2014; Abu-Hamour, 2013), their learning capacity, and their integration into university life, while others discovered negative attitudes toward students

with disabilities (Kalyva, Gojkovic and Tsakiri, 2007). Various countrywide studies investigating Indian teachers' (both school and universities) attitudes toward students with disabilities and their involvement in mainstream settings found mixed results. In India, teachers' training is insufficient, particularly when it comes to providing inclusive education for all children (Bindal and Sharma, 2010). A research of 480 pre-service teachers participating in a Bachelor of Education (B.Ed) programme at Pune University examined pre-service teachers' views and concerns about implementing inclusive education (Sharma, Moore and Sonawane, 2009). Participants in the research expressed relatively unfavourable opinions and a moderate level of worry about the inclusion of students with impairments. In a study of 470 regular school teachers in Delhi, Bhatnagar and Das (2013) found that teachers expressed a moderate degree of concerns about implementing inclusive education in their schools. Similarly, another study conducted in western state of India where the study's main conclusion was that Ahmedabad instructors were relatively worried about incorporating students with impairments in their classes (Shah et al., 2014). Kumar (2016) performed a research to explore the attitudes of university and school teachers about inclusive education. He found that university instructors had a positive attitude toward inclusive education than school teachers.

The main goal of this quantitative study is to examine the university teachers' perception of including students with disability in the public and private universities of India. Another objective was to look into the relationship between educators' perspectives toward inclusion and various demographic factors. The study also like to find out;

- (a) Do teachers' educational backgrounds have an impact on their views on inclusion?
- (b) Do teachers' years of teaching experience have a significant role in their perspectives about inclusion?
- (c) Do teachers' perspectives on inclusion differ based on whether they are male or female?
- (d) Is there a difference in teachers' opinions on inclusion depending on the type and frequency of interaction they have with persons with disabilities?

To answer the research questions, the following null hypotheses were developed:

*H1: There is no significant difference between the teachers' perspective about inclusion and their highest educational qualification.*

*H2: There will be no significant relationship between teacher perspectives about inclusion and years of teaching experience*

*H3: There is no significant difference in perception between male and female university teachers*

*H4: There is no significant difference between teachers' perspective about inclusion and teachers' had contact with people with disabilities and teachers' with no contact.*

## METHODOLOGY

### Sampling Technique

Pune city forms the urban heart of the eponymous Pune Metropolitan Region, together with the municipal corporation borders of Pimpri-Chinchwad Municipal Corporation and the three cantonment towns of Camp, Khadki, and Dehu Road.

With a diverse spectrum of educational institutions, the city of Pune is recognised as the Oxford of the East. The researcher conducted an internet search to determine which universities were located in the study area offering undergraduate, post graduate and PhD courses. Within the targeted metropolitan region, there were a total of 1 public university and more than 10 private universities. A multi-stage sampling approach method was utilized to choose the sample and participants for the study: purposive and simple random sample techniques. Seven universities were chosen using the purposive sampling selection technique from a pool of public, deemed, and private universities. A basic random sample procedure was used to pick participants for the study. The participants comprised of Professors, Associate Professors and Assistant Professors in universities and university affiliated colleges.

### Instrumentation

The instrument used in this study based on teachers’ attitudes towards inclusion scale was originally developed by Ernst and Rogers (2009) and later adopted by Carmen Celestine Wiggins (2012) for her doctorate degree. There were two components of the instrument that participants completed. The demographic and background information was collected in the first portion of the questionnaire. This section of the questionnaire was created based on previous researches. The researcher gathered demographic data by conducting a quick survey to obtain the following information: age and gender of the participant; years of teaching experience; grade level taught (UG/PG/M. Phil/PhD); highest education level; type of professional and personal experience with disabilities; and contact with students with disabilities.

The instrument’s second element was a scale that gathered teachers’ opinions regarding inclusion. Participants then responded to 27 items on a Likert-type questionnaire. The scale was adapted from Wiggins’s (2012) study on teachers’ perceptions of inclusion, which used a 7-point Likert scale, but it was changed to 5-point Likert scale, while retaining all the original information and to simplify data analysis. The scale asked participants to indicate how much they agreed or disagreed with the statement by selecting one of five options:

Strongly Agree (SA), Agree (A), Neutral, Disagree (D), and Strongly Disagree (SD). Several scholars have looked into the topic of different response scale formats and their equivalence. The adoption of a 5-point scale instead of the original 7-point scale should have little impact on the reliability and validity of the results. Lazar (2010) conducted a study to examine spirituality and job satisfaction among female Jewish Israeli hospital nurses, used a 5-point Likert scale with comparable anchors (1, strongly disagree and 5, strongly agree) instead of original scale of a 7-point Likert scale. In the same study, it was also reported that there was no considerable effect on the reliability or validity of the instrument. Research with this instrument showed acceptable reliability and validity (Ernst and Rogers 2009, Wiggins, 2012). The instrument used in the study had Cronbach’s coefficient alpha of 0.92 reported by the researchers.

### Participants

A total of 675 surveys were distributed to the participants and 309 (45.7% response rate) were returned. Over the course of four months, this study was performed employing a digital questionnaire on Google Forms. A cover e-mail outlining the survey’s goals, including background information, the study’s objective, and survey completion instructions. It also contained the link for digital survey form. Potential responders were told that participation was completely voluntary and that the information they provided would be kept private and confidential. For performing research, the researcher looked at various university/college websites to gather contact information for teaching faculty. When the researchers couldn’t find the participants’ contact information on the respective website, they turned to LinkedIn and Google search option.

Three hundred and nine academicians responded to the online poll. There were 49.8% males and 50.2% females among the 309 participants (see Table 2).

The years of experience of the participants are listed in Table 3. For University faculty, the highest percentage of participants (32.7%) were in the 6–10 year experience category.

The majority of educators with PhDs were among those who responded (See Table 4).

Demographic Factor	Respondents Age Subgroups	Frequency	Percentage
Age in years	19–25 years	0	0
	26–35 years	92	29.7
	36–45 years	156	50.5
	46–55 years	33	10.7
	56 years above	28	9.1

**Table 1: Age of the respondents (source: own calculation)**

Demographic Factor	Respondents Subgroups	Frequency	Percentage
Gender	Male	154	49.8
	Female	155	50.2

**Table 2: Gender of the respondents (source: own calculation)**

Demographic Factor	Respondents Subgroups	Frequency	Percentage
Teaching Experience in years	Less than 1 year	8	2.6
	1–5 years	98	31.7
	6–10 years	101	32.7
	11–15 years	62	20.1
	16–25 years	34	11.0
	Over 26 years	6	1.9

**Table 3: Teaching experience of the respondents (source: own calculation)**

Demographic Factor	Respondents Subgroups	Frequency	Percentage
Highest Qualification of the respondents	Bachelor’s Degree	6	1.9
	Master’s Degree	88	28.5
	PhD	209	67.6
	M.Phil	6	1.9

**Table 4: Highest qualification of the respondents (source: own calculation)**

61 of the 309 University teachers’ have a friend or relative who has some kind of the disability. 7 participants identified as a man or woman with a disability. 165 participants confirmed that “I have worked with pupil with disabilities as a teacher counselor or volunteer”. A thorough examination of the data revealed that 41 teachers had no contact with people with disabilities. From remaining participants from the same group, 102 teachers reported no direct contact with student with disabilities, 72 teachers reported direct contact at least once a week, and 94 university teachers usually have daily contact with students with disabilities.

### Data Analysis

Data were analyzed using IBM SPSS Statistics 20. Descriptive statistics, ANOVA, and Independent samples *t*-test were performed to analyze the data.

## RESULTS AND DISCUSSION

The purpose of this study was to learn about university teaching staff perspectives on including students with disabilities in the classroom. In addition, the current study looked into whether university teachers’ perceptions of inclusion are influenced by the number of years they’ve taught, their gender, their highest educational level, and their experience with students with disabilities. Frequency distributions were used to have

a better knowledge of the sample and the characteristics of the participants.

### Differences between degree level and teachers’ perspectives about inclusion

**RQ1:** Do teachers’ educational backgrounds have an impact on their views on inclusion?

The above research question is based on the teachers’ perspective about inclusion and highest educational qualification of teachers. The null hypothesis for this question will be

**H1:** *There is no significant difference between the teachers’ perspective about inclusion and their highest educational qualification.*

To analyse this hypothesis, normality has been tested by using Kolmogorov-Smirnov test, ANOVA test has been applied to compare the means of four educational qualifications i.e., bachelor’s degree, master’s degree, MPhil degree and PhD. Table 5 represents the test of normality by using Kolmogorov-Smirnov test, the result suggested that there is normality in bachelor’s and MPhil degree as the value of  $p > 0.05$ . Data is normally distributed for these two educational qualifications. Rest two are master’s degree and PhD, the result shows the *p* values are insignificant for master’s and PhD degree holders. So that there is no normality in data for these two educational qualifications.

Highest Educational Qualification	Kolmogorov-Smirnov		
	Statistic	df	<i>p</i> -value
Bachelor’s Degree	.215	6	.200
Master’s Degree	.267	88	< .001
MPhil	.180	6	.200
PhD	.304	209	< .001

**Table 5: Test of normality (source: own calculation)**

	Sum of Squares	df	Mean Square	<i>F</i>	<i>p</i> -value
Between Groups	4.663	3	1.554	1.147	.330
Within Groups	413.124	305	1.355		
Total	417.786	308			

**Table 6: ANOVA test (source: own calculation)**

Furthermore, ANOVA has been applied as there are four types of educational qualifications, table 6 represents that there is no significant difference in between group mean as  $p$ -value is less than 0.05. Therefore, the null hypothesis for this research question can't be rejected. There was no significant difference between degree level and teachers' perspectives about inclusion. These findings show that teachers' views toward inclusiveness are unaffected by their educational background.

International and domestic literature review helped to investigate and understand teachers' perspective about inclusion and their highest educational qualification. Prakash (2012) in the research titled, *Inclusion of Children with Hearing Impairment in Schools: A Survey on Teachers' Attitudes*, reported that teachers' with higher qualifications were more oriented toward inclusive education than their colleagues with lower educational credentials. The probable reason cited as individuals who have just graduated and are highly qualified have had more exposure to educational reform ideas and, as a result, are more open to notions like inclusive education. Antonak et al., (1995) in their study explained that teachers with greater educational degrees were shown to be more averse to integration.

To assess the relationship between years of teaching and teachers' perspectives about inclusion.

**RQ2:** Do teachers' years of teaching experience have a significant role in their perspectives about inclusion?

The second research question is based on the teaching experience and teachers' perspective about inclusion. The null hypothesis will be

**H2:** There will be no significant relationship between teachers' perspectives about inclusion and years of teaching experience.

To analyse this hypothesis, normality has been tested by using Kolmogorov-Smirnov test, ANOVA test has been applied to compare the means of experiences as less than one year, 1–5 years, 6–10 years, 11–15 years, 16–25 years, 26 years and above. Table 7 represents the test of normality by using Kolmogorov-Smirnov test, the result suggested that there is normality in less than a year experience as  $p$ -value is greater than 0.05. The other experiences are 1–5 years, 6–10 years, 11–15 years, 16–25 years and 26 years and above having normality in data as  $p$ -values are less than 0.05.

Furthermore, ANOVA has been applied as there are different groups in experiences and table 8 represents that there is significant difference in between group mean as  $p$ -value is less than 0.05. Therefore, null hypothesis for this research question is rejected. Furthermore, to check which group mean is different from other, Post hoc ANOVA has been applied. The result depicted two subsets in table of homogeneous subset (post hoc test) which represents that there were two subsets can be drawn. The first subset is having groups such as 26 years and above, 11–15 years, 6–10 years, 1–5 years and less than 1 year; and second subset is having 11–15 years, 6–10 years, 1–5 years, less than 1 year and 16–25 years. Both subsets are found insignificant which shows that there is no significant difference in means of these two subsets.

Years of Experience	Kolmogorov-Smirnov <sup>a</sup>		
	Statistic	df	$p$ -value
Less than a year	.241	8	.193
1–5 years	.276	98	< .001*
6–10 years	.297	101	< .001*
11–15 years	.433	62	< .001*
16–25 years	.367	34	< .001*
26 years and above	.365	6	.012*

**Table 7: Test of normality (source: own calculation)**

	Sum of Squares	df	Mean Square	F	$p$ -value
Between Groups	17.670	5	3.534	2.676	.022*
Within Groups	400.116	303	1.321		
Total	417.786	308			

**Table 8: ANOVA test (source: own calculation)**

There was no significant relationship between years of teaching experience and teacher perspectives on inclusion. These data show that instructors' attitudes toward inclusion are unaffected by their years of teaching experience.

Several studies have found that teaching experience has an impact on teachers' opinions about inclusion of students with disabilities in mainstream schools and University. In a related manner, some researchers found a strong negative relationship between years of teaching experience and attitudes toward inclusiveness, while others found no such link. Prakash (2012) did a study to assess and evaluate instructors' views on the inclusion of hearing-impaired students in Indian schools. A total of 100 regular teachers took part in the study, and they were divided into five groups. When compared to

teachers with less work experience, teachers with more than 10 years of experience had a more favourable attitude toward inclusive education. In contrast, teachers with fewer years of teaching experience had more positive attitudes about inclusive education than teachers with numerous years of teaching experience, according to De Boer, Pijl and Minnaert (2011).

### Differences in perception between male and female teachers

The next research question is based on the gender-wise teachers' perspective about inclusion.

**RQ3:** Do teachers' perspectives on inclusion differ based on whether they are male or female?

The null hypothesis for this question will be

**H3:** *There is no significant difference in perception between male and female university teachers.*

To analyse this hypothesis, Kolmogorov-Smirnov normality test and independent sample *t*-test has been applied.

The normality test of Kolmogorov-Smirnov reported in table 9 shows that there is no normality in data but coefficients are significant. Table 10 represents the mean difference in perception between male and female teachers; which shows that males are more positive towards inclusion than females

as their means value is 2.616 and females' mean value is 2.80 on 5-point Likert scale (1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree).

The assumption test, Levene's test value is not significant ( $p > 0.05$ ) that means assumption of independent sample *t*-test is fulfilled. Furthermore, it has been also observed that values are insignificant ( $p > 0.05$ ). Therefore, it can be interpreted that null hypothesis can't be rejected and concluded that there is no significant difference in perception between male and female university teachers.

Gender	Kolmogorov-Smirnov			
	Statistic	df	p-value	
Teachers' Perspective about Inclusion	Male	.320	154	< .001*
	Female	.252	155	< .001*

**Table 9: Test of normality (source: own calculation)**

Gender	N	Mean	Std. Deviation	Std. Error Mean
Male	154	2.6169	1.20021	.09672
Female	155	2.8000	1.12469	.09034

**Levene's Test for Equality of Variances**

	F	p-value	T	df	p-value	Mean Diff.	Std. Err.
Equal variances assumed	.727	.395	-1.384	307	.167	-.18312	.13232
Equal variances not assumed			-1.384	305.44	.167	-.18312	.13234

**Table 10: Difference in perception between male and female teachers (source: own calculation)**

There was no significant difference in the perception between male and female university teachers towards inclusion. In this study, it was found that male teachers were more positive than female university teachers towards educational inclusion but this difference is not significantly considerable. Therefore, it can be interpreted that perception towards inclusion is not being affected by genders of teachers.

As for the literature in relation to gender, the results of studies on teacher beliefs about inclusive education are mixed. According to Otunyo and Ekom-Idorenyin (2020) study, female teachers ordinary secondary school teachers in Nigeria had a less favourable perception toward students with special education needs.

When compared to male instructors, female teachers working in a regular academic context demonstrated a positive attitude toward inclusive education for students with hearing impairment, according to a poll performed in the Indian state of Andhra Pradesh (Prakash, 2012). Another meta-analysis study was undertaken by Orakçı et al. (2016) on the topic of the influence of gender and special education training on attitudes toward inclusion. After analysing the data, it was discovered that gender had no significant impact on attitudes for inclusive education. Main and Hammond (2008) in their study in an Australian University reported, prior to practicum, men pre-service teachers reported statistically substantially greater levels of self-efficacy than female pre-service teachers. Overall, the findings on the impact of teachers' gender were conflicting; some researchers claimed that female teachers

have more positive views toward inclusion than male teachers.

Gender did not have a significant effect, according to other researchers. Ernst (2006) investigated the impact of regular education teachers' gender and teaching experience on their attitudes about inclusive education in Connecticut, USA. According to the results of her research, male educators had more favourable affective attitudes about inclusion than female teachers. Similarly, Hussien and Al-Qaryouti (2014) reported that in each component of attitudes (cognitive, emotional, and behavioural intentions), male teacher had considerably more positive views than female teachers.

**Differences between University teacher perspectives and social contact with students with disabilities.**

**RQ4:** Is there a difference in teachers' opinions on inclusion depending on the type and frequency of interaction they have with persons with disabilities? The last research question is based on the social contact with disabled people or not and inclusion. The null hypothesis will be as below:

**H4:** *There is no significant difference between teachers' perception about inclusion and teachers' contact with people with disabilities and teachers with no contact.*

To analyse this hypothesis, Kolmogorov-Smirnov normality test and independent sample *t*-test has been applied. The normality test of Kolmogorov-Smirnov reported in table 11 shows that there is no normality in data and the coefficients also not statistically significant.

Contact with People with Disabilities		Kolmogorov-Smirnov		
		Statistic	df	p-value
Teachers' Perspective about Inclusion	Yes	.338	207	< .001*
	No	.227	102	< .001*

**Table 11: Test of Normality (source: own calculation)**

Gender	N	Mean	Std. Deviation	Std. Error Mean
Yes	207	2.5894	1.18259	.08220
No	102	2.9510	1.09343	.10827

**Levene's Test for Equality of Variances**

	F	p-value	T	df	p-value	Mean Diff.	Std. Err.
Equal variances assumed	3.292	0.791	-2.590	307	.010	-.36161	.13961
Equal variances not assumed			2.660	215.83	.008	-.36161	.13593

**Table 12: Difference in perception between who had contact with people with disabilities and no contact with people with disabilities (source: own calculation)**

Table 12 represents the mean difference in perception between who had contact with disabled people and those who had no contact with disabled people; which can be interpreted that those who had contact with disabled people are more positive than those who had no contact as the mean value for those who had been in contacted is 2.58 and who did not have any contact with mean value 2.95 on 5-point Likert scale (1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree). Levene's test for equality of variance. The result shows that Levene's test value is not significant ( $p > 0.05$ ) that means assumption of independent sample *t*-test is fulfilled. If assumption is fulfilled then we follow the 'equal variances assumed' and it has been found significant ( $p < 0.05$ ). Therefore, it can be interpreted that null hypothesis is rejected, there is significant difference between teachers' perspectives about inclusion and teachers' having contact with people with disabilities and teachers' with no contact with people with disabilities. More specifically, it was found that University teachers' increased/greater interaction with students with disabilities held more positive attitudes towards their inclusion than their colleagues with less contact with student with disabilities.

Differences in attitudes toward educational inclusion are also influenced by the amount of contact (quality vs. quantity) with students with disabilities. McManus et al. (2010), looked at multidimensional attitudes toward people with intellectual disabilities, as well as the difference in quantity and quality of contact with such minority group. However, it was discovered that higher contact quality was linked to more favourable sentiments. Positive experiences may lead to reduced intergroup anxiety, less animosity, and less avoidance of outgroups, according to past research.

In another study conducted by Brandes and Crowson (2009) in the USA had a total of 190 (male  $n = 42$ , female  $n = 148$ ) pre-service educators participating in bipolar scale survey. The study's goal was to see if there was a link between pre-service teachers' conservative ideas and discomfort with disability on one hand, and reported unfavorable attitudes toward disabled students and hostility to inclusion on the other. Pre-service educators who report higher levels of social dominance orientation, right-wing authoritarianism,

economic and cultural conservatism, and discomfort with disabilities are more likely to oppose inclusion and have negative attitudes toward students with disabilities, according to the correlational findings of this empirical study.

The nature and severity of the disability have an impact on instructors' attitudes as well as their perceptions of educational inclusion. Therefore, many authors have adopted multi-dimensional approach while conducting their research on educational inclusion of students with disabilities and reported how teachers contact with different types of disabilities affected their attitudes. For example, Lipka, Khouri and Shecter-Lerner (2019) evaluated faculty members' views toward students with learning disabilities (LD) at a public university in Israel, and found that faculty members had a substantial amount of contact hold good opinions toward students with LD.

**CONCLUSION**

One of the core purposes of disability studies was to enhance inclusion literacy among academicians at the school and university level. To students with impairments, teachers must function as mentors and gurus. They must encourage students with disabilities to be self-sufficient and such students should be able to inspire other students through their distinctiveness. The role of a teacher is more than just teaching diversified group of students in a classroom while students take notes. Students with disability benefit from inclusion in regular school because it enriches their learning and improves their outcomes (McLeskey and Waldron, 2011).

The main objective of this study as to examine the university teachers' perception of including students with disability different universities in Pune, India. This study exhibited substantial results with respect to the teachers' qualifications, teaching experience, gender and social contact with people with disabilities. Teachers' opinions of inclusion were shown to be unaffected by their degree level or years of experience in this study.

Because students with all types of disabilities are educated in mainstream education platforms, university educator's experiences with various disabilities has an impact on their opinions. Further research is needed to understand differences



in attitudes. Future research will aim to assess the nature of academicians' attitudes toward inclusion in light of recent reforms to India's National Education Policy, 2020. Despite the growing trend towards inclusive environment in India, little is known about Indian university teachers' views on inclusion of students with disabilities. For this reason, additional research is needed at country level to examine University teachers' attitudes to the inclusion of young children with a disability, as well as some of the factors that may be associated with these attitudes. In India, the majority of research on inclusion

is performed at the primary and secondary school level, therefore more study on inclusion at the postsecondary level, i.e. university level, is required.

## LIMITATIONS

There are a few limitations to this study. First, because the participants are from a single Indian city, the findings may not apply to other Indian cities. Second, some participants may have offered socially desirable replies that were not exactly their real opinions when self-reported data was gathered.

## REFERENCES

- Abu-Hamour, B. (2013) 'Faculty attitudes toward students with disabilities in a public university in Jordan', *International Education Studies*, Vol. 6, No. 12, pp. 74–81. <https://doi.org/10.5539/ies.v6n12p74>
- Antonak, R. F., Mulick, J. A., Kobe, F. H. and Fiedler, C. R. (1995) 'Influence of mental retardation severity and respondent characteristics on self-reported attitudes towards mental retardation and eugenics', *Journal of Intellectual Disability Research*, Vol. 39, No. 4, pp. 316–325. <https://doi.org/10.1111/j.1365-2788.1995.tb00523.x>
- Bansal, S. (2016) 'Attitude of teachers towards inclusive education in relation to their professional commitment', *Indian Journal of Educational Studies: An Interdisciplinary Journal*, Vol.3, No.1, pp. 96–108.
- Banks, M. and Polack, S. (2014) *The economic costs of exclusion and gains of inclusion of people with disabilities*. London: CBM, International Centre for Evidence in Disability and London School of Hygiene and Tropical Medicine, [Online], Available: [https://www.cbm.org/fileadmin/user\\_upload/Publications/Costs-of-Exclusion-and-Gains-of-Inclusion-Report.pdf](https://www.cbm.org/fileadmin/user_upload/Publications/Costs-of-Exclusion-and-Gains-of-Inclusion-Report.pdf) [14 May 2021].
- Bhatnagar, N., and Das, A. K. (2013) 'Nearly two decades after the implementation of persons with disabilities act: concerns of Indian teachers to implement inclusive education', *International Journal of Special Education*, Vol. 28, No. 2, pp. 104–113.
- Bindal, S. and Sharma, S. (2010) 'Inclusive education in Indian context', *Journal of Indian Education*, Vol. 35, No. 4, pp. 34–45.
- Bose, S., Ghosh, P. and Sardana, A. (2017) 'Resource requirements for Right to Education (RTE): normative and the real', *National Institute of Public Finance and Policy*, Working Paper No. 201, pp. 1–50.
- Brandes, J. A. and Crowson, H. M. (2009) 'Predicting dispositions toward inclusion of students with disabilities: The role of conservative ideology and discomfort with disability', *Social Psychology of Education*, Vol. 12, No. 2, pp. 271–289. <https://doi.org/10.1007/s11218-008-9077-8>
- Bukvić, Z. (2014) 'Teachers Competency for Inclusive Education', *The European Journal of Social & Behavioural Sciences*, Vol.11, No.4, pp. 407–412. <https://doi.org/10.15405/ejbsbs.141>
- Chari, R. (2020) 'NEP 2020: Empowering the teacher', *The Times of India*, [Online], Available: <https://timesofindia.indiatimes.com/blogs/edutrends-india/nep-2020-empowering-the-teacher/> [10 Oct 2021].
- Costea-Barluti, C. and Rusu, A. S. (2015) 'A preliminary investigation of Romanian university teachers' attitudes towards disabilities – A premise for inclusive interaction with students with disabilities', *Procedia - Social and Behavioral Sciences*, Vol. 209, pp. 572–579. <https://doi.org/10.1016/j.sbspro.2015.11.289>
- Dash, J., Purohit, S., Padhy, S. and Hota, S. (2019) 'A study on attitude of prospective teacher educators towards inclusive education', *International Journal of Applied Research*, Vol. 5, No. 5, pp. 22–26.
- De Boer, A., Pijl, S., and Minnaert, A. (2011) 'Regular primary school teachers' attitudes towards inclusive education: a review of the literature', *International Journal of Inclusive Education*, Vol. 15, No. 3, pp. 331–353. <https://doi.org/10.1080/13603110903030089>
- Ernst, C. (2006) *High school teachers' attitudes towards inclusion of students with special needs*, [Unpublished doctoral dissertation], Kingston, RI: University of Rhode Island.
- Ernst, C. and Rogers, M. (2009) 'Development of the inclusion attitude scale for high school teachers', *Journal of Applied School Psychology*, Vol.25, No. 3, pp. 305–322. <https://doi.org/10.1080/15377900802487235>
- Forlin, C. (2010) 'Reframing teacher education for inclusion', in Forlin, C. (ed.) *Teacher education for inclusion: Changing paradigms and innovative approaches* (pp. 3–12), Oxon, UK: Routledge
- Hussien, J. H. and Al-Qaryouti, I. (2014) 'Regular education teachers' attitudes towards inclusion in Oman', *Journal of Educational and Psychological Studies*, Vol. 8, No. 4, pp. 617–626. <https://doi.org/10.24200/jeps.vol8iss4pp617-626>
- Imaniah, I. and Fitria, N. (2018) 'Inclusive education for students with disability', SHS Web Conf. Volume 42, Global Conference on Teaching, Assessment, and Learning in Education, Sanur, pp. 1–5. <https://doi.org/10.1051/shsconf/20184200039>
- Janiga, S. J. and Costenbader, V. (2002) 'The transition from high school to postsecondary education for students with learning disabilities: A survey of college service coordinators', *Journal of Learning Disabilities*, Vol. 35, No. 5, pp. 463–470. <https://doi.org/10.1177/00222194020350050601>
- Kalyva, E., Gojkovic, D. and Tsakiri, V. (2007) 'Serbian teachers' attitudes towards inclusion', *International Journal of Special Education*, Vol. 22, No. 3, pp. 31–36.
- Kumar, A. (2016) 'Exploring the teachers' attitudes towards inclusive education system: a study of Indian teachers', *Journal of Education and Practice*, Vol. 7, No. 34, pp. 1–4.
- Kumar, A. and Midha, P. (2017) 'Attitudes toward inclusive education among school teachers: A comparative study', *The International Journal of Indian Psychology*, Vol. 4, No.2, pp. 1–3. <https://doi.org/10.25215/0402.166>
- Lazar, A. (2010) 'Spirituality and job satisfaction among female Jewish Israeli hospital nurses', *Journal of Advanced Nursing*, Vol. 66, No. 2, pp. 334–344. <https://doi.org/10.1111/j.1365-2648.2009.05172.x>

- Lipka, O., Khouri, M. and Shecter-Lerner, M. (2019) 'University faculty attitudes and knowledge about learning disabilities', *Higher Education Research and Development*, Vol. 39, No. 5, pp. 982–996. <https://doi.org/10.1080/07294360.2019.1695750>
- Lombardi, A. R. and Murray, C. (2011) 'Measuring university faculty attitudes toward disability: Willingness to accommodate and adopt Universal Design principles', *Journal of Vocational Rehabilitation*, Vol. 34, No. 1, pp. 43–56. <https://doi.org/10.3233/JVR-2010-0533>
- Mag, A. G., Sinfield, S. and Burns, T. (2017) 'The benefits of inclusive education: new challenges for university teachers', *8th International Conference on Manufacturing Science and Education – MSE 2017 “Trends in New Industrial Revolution”*, Sibiu. <https://doi.org/10.1051/mateconf/201712112011>
- Main, S. and Hammond, L. (2008) 'Best Practice or Most Practiced? Pre-service Teachers' Beliefs about Effective Behaviour Management Strategies and Reported Self-efficacy', *Australian Journal of Teacher Education*, Vol. 33, No. 4, pp. 28–39. <https://doi.org/10.14221/ajte.2008v33n4.3>
- McManus, J. L., Feyes, K. J. and Saucier, D. A. (2010) 'Contact and knowledge as predictors of attitudes toward individuals with intellectual disabilities', *Journal of Social and Personal Relationships*, Vol. 28, No. 5, pp. 579–590. <https://doi.org/10.1177/0265407510385494>
- McLeskey, J. and Waldron, N. L. (2011) 'Educational Programs for Elementary Students with Learning Disabilities: Can They Be Both Effective and Inclusive?', *Learning Disabilities: Research and Practice*, No. 26, Vol. 1, pp. 48–57. <https://doi.org/10.1111/j.1540-5826.2010.00324.x>
- Ministry of Human Resource (2020) *National Education Policy*, [Online], Available: [https://static.pib.gov.in/WriteReadData/userfiles/NEP\\_Final\\_English\\_0.pdf](https://static.pib.gov.in/WriteReadData/userfiles/NEP_Final_English_0.pdf) [11 May 2021].
- Ministry of Law, Justice and Company Affairs (1996) *PWD ACT, 1995; The Persons with Disabilities (Equal Opportunities, Protection Of Rights And Full Participation) ACT, 1995*, [Online], Available: <https://www.niepmid.tn.nic.in/documents/PWD%20ACT.pdf> [20 Nov 2021].
- Ministry of Statistics & Programme Implementation (2019) *NSS report no. 583: Persons with Disabilities in India NSS 76th round (July – December 2018)*. Press Information Bureau, [Online], Available: [https://pib.gov.in/PressReleasePage.aspx?PRID=1593253#:~:text=583%3A%20Persons%20with%20Disabilities%20in,round%20\(July%20%E2%80%93%20December%202018\)andtext=The%20National%20Statistical%20Office%20\(NSO,National%20Sample%20Survey%20\(NSS\)](https://pib.gov.in/PressReleasePage.aspx?PRID=1593253#:~:text=583%3A%20Persons%20with%20Disabilities%20in,round%20(July%20%E2%80%93%20December%202018)andtext=The%20National%20Statistical%20Office%20(NSO,National%20Sample%20Survey%20(NSS)) [10 Apr 2021].
- Orakçı, S., Aktan, O., Toraman, C. and Çevik, H. (2016) 'The Influence of Gender and Special Education Training on Attitudes towards Inclusion', *International Journal of Instruction*, Vol. 9, No. 2, pp.107–122. <https://doi.org/10.12973/iji.2016.928a>
- Otunyo, M., and Ekom-Idorenyin, V. (2020) 'Influence of gender and qualification on the attitude of regular secondary school teachers towards students with special needs', *European Journal of Special Education Research*, Vol. 5, No. 3, pp. 1–16. <https://doi.org/10.5281/zenodo.3598159>
- Parsuram, K. (2006) 'Variables that affect teachers' attitudes towards disability and inclusive education in Mumbai, India.', *Disability and Society*, Vol. 21, No. 3, pp. 231–42. <https://doi.org/10.1080/09687590600617352>
- PTI(2015)*Disabled students' count in Indian institutions at 0.56 per cent*. The Times of India, [Online], Available: [http://timesofindia.indiatimes.com/articleshow/46808219.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cppst](http://timesofindia.indiatimes.com/articleshow/46808219.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst) [22 Feb 2021].
- Prakash, S. S. (2012) 'Inclusion of children with hearing impairment in schools: a survey on teachers' attitudes. Disability', *CBR and Inclusive Development*, Vol. 23, No. 3, pp. 90–111. <http://doi.org/10.5463/dcld.v23i3.117>
- Raut, L. K., Manoranjan, P. and Bharati, P. (2014) 'The economic burden of disability in India: estimates from the NSS data', *SSRN*. <https://dx.doi.org/10.2139/ssrn.2432546>
- Reynolds, S. and Hitchcock, J. (2014) 'Faculty attitudes towards teaching adults with learning disabilities', *Journal of Research and Practice for Adult Literacy: Secondary and Basic Education*, Vol. 3, No. 1, pp. 35–48.
- Sarkar, T. (2020) 'Examining disability inclusion in India's new national education policy', *UKFIET: The Education and Development Forum*, [Online], Available: <https://www.ukfiet.org/2020/examining-disability-inclusion-in-indias-new-national-education-policy/> [12 Oct 2021].
- Shah, R., Das, A., Desai, I. and Tiwari, A. (2014) 'Teachers' concerns about inclusive education in Ahmedabad, India.', *Journal of Research in Special Educational Needs*, Vol. 16, No. 1, pp. 1–12. <https://doi.org/10.1111/1471-3802.12054>
- Sharma, U., Moore, D. and Sonawane, S. (2009) 'Attitudes and concerns of pre-service teachers regarding inclusion of students with disabilities into regular schools in Pune, India.', *Asia Pacific Journal of Teacher Education*, Vol. 37, No. 3, pp. 319–331. <https://doi.org/10.1080/13598660903050328>
- Singh, J. D. (2016) 'Inclusive Education in India – Concept, Need and Challenges', *Scholarly Research Journal for Humanity Science and English Language*, Vol. 3, pp. 3222–3232.
- Thomas, P. (2005) 'Mainstreaming Disability in Development: India Country Report.' *Disability Knowledge and Research Report*, [online], Available: <https://catalog.ihns.org/index.php/citations/9623> [14 May 2021].
- United Nations (n. d.) *The 17 goals | Sustainable Development*, [online], Available: <https://sdgs.un.org/goals> [11 Apr 2021].
- Wiggins, C. C. (2012) *High school teachers' perceptions of inclusion*, Lynchburg, VA: Liberty University, [Online]. Available: <https://core.ac.uk/download/pdf/58824738.pdf> [20 Nov 2021].