# Factors affecting teachers' practices of inclusive instructional strategies in teaching students with visual impairments in schools of Addis Ababa, Ethiopia

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## Abstract

This study aimed to investigate factors affecting teachers' practice of inclusive instructional strategies in teaching students with visual impairments (SVI) in regular schools of Addis Ababa. The study employed a quantitative methodology, with cross-sectional survey design. Data was gathered, using a survey questionnaire, from 421 teachers from 19 primary and 15 secondary schools. A hierarchical multiple linear regression analysis was used to examine the influence of knowledge, self-efficacy & attitudes on the practice of inclusive instruction strategies in teaching SVI in regular schools. The outcomes indicated that teachers had the required knowledge about inclusive instruction strategies. Conversely, a moderate level of teachers' self-efficacy (M=3.00, SD=1.01) in teaching SVI and favorable attitudes towards inclusion of SVI (M=3.92, SD=0.64) were found in this study. Similarly, this study demonstrated a moderate level of teachers' practice of inclusive instruction strategies in teaching SVI (M=2.69 out of 4, SD=0.83). Teachers' self-efficacy and attitude were found to be significant predictors of practice, while knowledge was not a significant predictor. Self-efficacy accounted for 25.5% of the variance in practice, which was the most significant predictor of practice. All the independent variables together explained 31.4% of the variance in practice. Conclusion and possible implications for practice were indicated.

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## Introduction

Over time, the idea of universal education has changed globally, embracing a variety of strategies for addressing the needs of children with disabilities and special educational needs. Offering instruction in both segregated and integrated situations was one of the strategies employed for children with disabilities and special educational needs. According to UNESCO (2018), students with disabilities seldom interact with students without disabilities in both settings, and they typically do not have access to the national curriculum. Through time, these approaches were challenged to move towards including children with disabilities in the regular schools as it can provide learning opportunities, within the regular school system, for those groups who have been excluded in the past. The goal of inclusive education

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is to ensure that every child is able to attend local school with same learning opportunities as their peers, and participate in the academic and social activities in the classroom (Martínez & Porter, 2020). Scholars such as Symes and Humphrey (2012) and Wapling (2016) have emphasized the need of providing quality inclusive education that values each student's presence regardless of their needs or disabilities and promotes their active participation and acceptance by peers and teachers.

Teachers are identified as key factors in determining the success of inclusive education (Ackah-Jnr, 2010; Cate et al., 2018; Miyauchi, 2020; Voltz et al, 2001). But they can also be significant obstacles if they don't understand inclusion, don't support it, lack the necessary skills, or have a negative attitude towards inclusive education (Ackah-Jnr, 2010; Lamichhane, 2017; Rieser, 2012). Previous research revealed that a number of teacher-related factors, such as teachers' lack of confidence in their ability to manage students with disabilities (Gray, 2009), regular class teachers' lack of training (Cate et al., 2018; Zagona et al., 2017), and rigid teaching strategies in classroom instruction posed challenges to the success of inclusive education. Moreover, Blecker and Boakes (2010) suggested that the attitudes and knowledge of teachers are the core professional competencies that can influence the implementation of inclusive educational practices at schools. Mu et al. (2015) also indicated attitude and knowledge as the main pillars of professional competence of inclusive education teachers. Along with their attitudes, teachers' self-efficacy beliefs have also been found to be crucial for inclusive education (Savolainen et al., 2022; Werner et al., 2021). The significance of teachers' self-efficacy in meeting the diverse needs of students in inclusive education was also emphasised by Tseeke (2021). This study, therefore, examined how teachers' knowledge, self-efficacy and attitudes influence their practices of inclusive instruction in teaching students with visual impairment (SVI) in regular primary and secondary schools at Addis Ababa, Ethiopia.

## Problem Statement

Prior studies on the education of SVI in Ethiopia have primarily described the challenges they face in inclusive education environments. Studies by Arkato (2004), Molla (2007), Bantyrgu (2014), Hadgu (2015), and Ayalew (2020), for example, examined the educational and psychosocial difficulties that SVI encountered in regular schools. Gebru (2015) emphasized the difficulties in addressing the needs of SVI in Ethiopian national examinations. Debele (2021) evaluated the readiness of schools to educate these students noting challenges such as teachers' lack of knowledge about students' need, shortage of educational materials in braille, negative attitude of teachers, and poor physical environments. Similar findings on the social isolation and withdrawal of SVI, as well as the unfavorable attitudes of teachers and sighted students towards SVI, were previously documented by Abichu (2015). Furthermore, a study conducted by Rachel (2016) emphasizes that teachers lack inclusive education strategies to address SVI in regular schools. Studies conducted locally have shown that teachers are not proficient in handling SVI in regular schools; they are also unable to modify their teaching strategies to address the needs of SVI (Abera, 2017; Arkato, 2004; Bidika, 2014). Additionally, other studies indicate that many

schools' physical layouts are inhospitable to students who have visual impairments (Arkato, 2004; Mekurya, 2014).

The majority of local studies that have been conducted so far have been descriptive in nature, failing to indicate how teachers' professional competencies—such as knowledge, self-efficacy, and attitude—affect the practice of inclusion of SVI in regular schools. Additionally, these studies do not statistically demonstrate the relationship between the variables under investigation. Therefore, this study focused on teachers' practices of inclusion of SVI, through utilizing disability specific instruction strategies, and factors influencing it, such as knowledge, attitude, and self-efficacy.

In this study, teachers' knowledge refers to their understanding of the inclusive instruction strategies used to teach SVI; their attitude refers to their stance on inclusion of SVI in regular schools; and their self-efficacy refers to their belief in their ability to teach SVI. In a similar manner, practice refers to teachers' use of disability-specific teaching strategies in teaching SVI in regular schools. The strategies could be preparing alternative assignments or activities aligned with the needs of SVI, speaking clearly and facing the class while speaking, simultaneously saying and writing on black- or whiteboard, using tactile and concrete materials while teaching SVI, and other instructional activities. Therefore, teachers' knowledge, self-efficacy and attitudes served as factors that determined teachers' practices of inclusive instruction strategies in teaching SVI in regular primary and secondary schools of Addis Ababa. The findings of the study is expected to add substantially to our understanding regarding the relationship between the study variables and also support ongoing efforts of including SVI in regular schools.

The main purpose of this study is to investigate the factors that affect teachers' practice of inclusive instructional strategies in teaching SVI in regular schools. In light of this purpose, the study is organized into the following research questions: (1) What is the level of teachers' a) understanding of disability-specific inclusive instructional strategies employed in teaching SWI; b) attitudes toward the inclusion of students with visual impairments in regular schools; c) self-efficacy in teaching SVI; and d) practice of inclusive instructional strategies in teaching SVI in regular schools? (2) How do the above factors—understanding, attitudes, and self-efficacy—influence teachers' practice of inclusive instructional strategies in teaching SVI in regular schools?

# Methods

## Approach and Design

The study employed a quantitative methodology, collecting data from study participants through the use of a cross-sectional survey design. According to Creswell and Creswell (2018), this type of study design uses structured interviews or questionnaires to collect data from a sample of the population with the goal of extrapolating findings from the sample to the entire population. This allows researchers to describe trends, attitudes, or opinions of the population quantitatively or numerically.

## Sample and Sampling Techniques

The sample size for the study was calculated based on the formula developed by Yamane (1973) using a 95% confidence level. According to the education statistics annual abstract of Addis Ababa city administration education bureau, there are 12,535 primary school teachers and 5,423 secondary school teachers in government schools of Addis Ababa (AACAEB, 2020). Using the above formula, the sample size determined for school teachers comes to be 388. The study considered additional of 10% of sample size for any attrition during the study.

A multi-stage sampling technique was applied to select teachers from primary and secondary schools of Addis Ababa. Enrollment of SVI served as the inclusion criterion for selection of sub-cities and schools. First, eight sub-cities were randomly selected out of the total available eleven sub-cities of Addis Ababa. Then, three primary and three secondary schools that enrolled SVI were randomly selected for data collection from each of the Akaki-Kality, Gullele, Kolfe-keranyo, Lideta and Yeka sub-cities. Two primary schools from Arada, one secondary school from Kirkos and one primary school from Addis Ketema sub-cities were randomly picked using a lottery method. So, accordingly, teachers were drawn from nineteen primary and fifteen secondary schools. Following the preparation of the sampling frame in cooperation with the principals of the sampled schools, teachers were finally selected at random using the lottery method. A list of the teachers teaching SVI in the sampled schools, during the data collection period, was included in the sampling frame.

## Instruments

In a descriptive-survey research, a survey or questionnaire is considered as main tool to collect data (Lodico, Spaulding & Voegtle, 2006). In this study, survey questionnaire is prepared to gather data from primary and secondary school teachers teaching SVI. The survey questionnaire was prepared after extensive review of related literature. Teachers' survey questionnaires were used to gather the following data.

Through the use of the survey questionnaire, background data of the respondents was gathered, including their sex, years of teaching experience, educational background, and training in Special Needs Education (SNE) /Inclusive Education (IE). Moreover, it was used to assess knowledge, self-efficacy, attitude and practice of teachers with regard to inclusion of SVI in regular schools.

The subscale 'knowledge' consists of eighteen items with a dichotomous True or False options assessing teachers' understanding on inclusive instructional strategies that could be used in teaching SVI in regular schools. Example of these items includes 'Students with visual impairments require additional time to complete assignments'. The items were stated as true statements with possible minimum and maximum scores between zero and eighteen.

With regard to self-efficacy, nine items that gauge perceived capabilities of teachers in teaching SVI in regular schools were included. A five-point Likert scale was used to rate the items. That is, a score of 5, 4, 3, 2, and 1 was respectively designated for strongly agree, agree, undecided, disagree, and strongly disagree.

The 'attitudes' subscale consisted of sixteen items that measure teachers' attitudes towards the inclusion of SVI in regular schools. A Likert five-point scale was employed: 1 is strongly disagree, 2 is disagree, 3 is uncertain, 4 is agree, and 5 is strongly agree. Concerning practice, twenty-eight items were used to assess the extent to which teachers employed disability-specific inclusive instructional strategies to teach SVI in regular schools. These items described specific teaching techniques used to teach SVI, such as 'I prepare alternative assignments/ activities that fits with the needs of students with visual impairments', 'I speak clearly and face the class when I speak', 'I simultaneously say and write on black- or whiteboard', 'I use tactile and concrete materials to teach SVI.' A five-point Likert scale was used for ratings responses to this subscale: 0 is never, 1 is seldom, 2 is sometimes, 3 is very often, and 4 is always.

**Validity and Reliability of Instruments**

The authors of this study reviewed related literature and prepared a survey questionnaire to assess knowledge, self-efficacy, attitude and practice of teachers with regard to inclusion of SVI in regular schools. Polit and Beck (2006) suggested undertaking a rigorous scale development procedure to validate new scales like the case in the current study. Accordingly, they suggest undertaking content validity index for items (I-CVI) and content validity index for scales (S-CVI). A panel of six subject matter experts was selected for this study, and they used a four-point scoring system to assess each prepared item for relevance and clarity. To judge relevance of items in the construct, the four-point ordinal rating scale used was: 1= the item is not relevant to the measured domain, 2= the item is somewhat relevant to the measured domain, 3= the item is quite relevant to the measured domain and 4= the item is highly relevant to the measured domain. For clarity, the scale constituted: 1= the item is not clear, 2= the item needs major revision to be clear, 3= the item needs minor revision to be clear, and 4= the item is clear. The practice subscale's content validity index (I-CVI) runs from 0.5 to 1.0, whereas the knowledge, self-efficacy, and attitude subscales' content validity indexes vary from 0.67 to 1.0. Accordingly, 14 of the 92 items that were originally included in the survey questionnaire were deleted as a result of this procedure. The minimum accepted standard of I-CVI used for decision was 0.83 (Lynn, 1986). The S-CVI/Ave was also found to be more than 0.8, which is considered as an acceptable standard by scholars like Polit and Beck (2006).

A pilot study was conducted with 67 teachers from two elementary schools and four secondary schools in Addis Ababa to test the improved scale. The data was analyzed using SPSS to check the internal consistency using Cronbach's alpha. Four items from the knowledge subscale and three from the practice subscale were removed from the survey questionnaire based on the calculated psychometric characteristics.

Cronbach's alpha coefficient is one of the most commonly used methods of verifying internal consistency of items in a scale. In this study, the Cronbach's alpha coefficient for knowledge, self-efficacy, attitude and practice constructs resulted in 0.70, 0.916, 0.868, and 0.955, respectively, suggesting that the items in the constructs were internally consistent (Cohen, Manion & Morion, 2017).

### Data Collection Procedures

The Institutional Review Board (IRB) assessed the research proposal on its relevance, methodological and ethical procedures. An IRB decision letter, with a reference number of CEBS-IRC-01/2022, was obtained to proceed with the study.

Six education supervisors from various sub-cities were selected by the researchers to support the quantitative data collection. These supervisors received orientation on the purpose of the study, the survey instrument, and the ethical issues surrounding the data collection. While data collectors were taking data at schools, the researchers performed on-site checks to improve the quality of the data gathered. Permission was secured from the respective school principals and verbal consent was established from the school teachers. Teachers were made aware of the study's objectives, respondent anonymity, and response confidentiality.

### Data Analysis

The data was coded and analyzed using SPSS 20 software. Descriptive statistics was conducted regarding sex, educational qualification, teaching experience and status of training on SNE/IE. Moreover, descriptive statistics, including mean and standard deviation, was generated for the knowledge, self-efficacy, attitude and practice subscales. A correlation test was used to determine the strength and the direction of relationship among the study variables. A hierarchical multiple linear regression test was used to control the impact of background variables such as sex, years of experience, educational background, and training on SNE/IE in order to investigate the effects of knowledge, self-efficacy, and attitude on teachers' practice of inclusive instruction strategies in teaching SVI in regular schools. Tests for multicollinearity and normality were performed to assess statistical assumptions of the instrument.

## Results

This study was designed to investigate factors affecting teachers' practice of inclusive instruction strategies in teaching SVI in regular schools of Addis Ababa. The following table presents the demographic characteristics of the respondents.

**Table 1**

*Demographic Characteristics of School Teachers*

| Demographic Characteristics | Classification | n | % |
|---|---|---|---|
| Sex | Male | 195 | 46.3 |
| | Female | 213 | 50.6 |
| | Missing | 13 | 3.1 |
| | Total | 421 | 100.0 |
| Current educational qualification | Certificate | 7 | 1.7 |
| | Diploma | 78 | 18.5 |
| | B.Sc./B.A./B.Ed. | 263 | 62.5 |
| | M.A./M.Sc./M.Ed. | 73 | 17.3 |
| | Total | 421 | 100.0 |

| Demographic Characteristics | Classification | n | % |
|---|---|---|---|
| Have you taken courses on SNE or IE at college/university level? | Yes | 297 | 70.5 |
| | No | 124 | 29.5 |
| | Total | 421 | 100.0 |
| Have you received on-job training on SNE or IE? | Yes | 242 | 57.5 |
| | No | 179 | 42.5 |
| | Total | 421 | 100.0 |
| Teaching Experience in years | 5 Years and less | 51 | 12.1 |
| | More than 5 Years | 364 | 86.5 |
| | Missing | 6 | 1.4 |
| | Total | 421 | 100.0 |
| | Mean=12.02, SD= 6.94 | | |

Source: survey questionnaire

As shown in Table 1, a total of 421 teachers (58.4%) from primary schools and the remaining (41.6%) from high schools of Addis Ababa took part in the study. It appears from Table 1 that half of the teachers approached for data collection were female, while male teachers constituted 46.3% of the sample. In terms of their educational qualification, 62.5% of them possessed first degree while second degree holders constituted 17.3% of the sampled teachers. The remaining 18.5% of teachers were diploma holders and 1.7% were having qualification at certificate level. High proportion of school teachers (70.5%) indicated that they took SNE or IE courses at college or university level. As can be seen from the same table, 42.5% of teachers have not received on-job training on SNE or IE. As far as their experience is concerned, the great majority of teachers (86.5%) have more than 5 years of teaching experience while the average is 12 years.

Table 2 presents the descriptive statistics, reliability and inter-correlation among the variables of the study. The table shows that practice is positively correlated with self-efficacy ($r = 0.542$, $p < 0.01$) and attitude ($r = 0.284$, $p < 0.01$), but the correlation with knowledge is not statistically significant ($r = 0.077$, $p > 0.05$).

**Status of the Constructs Measured**

**Table 2**

*Descriptive statistics, reliability and correlations of study variables (N=421)*

| Variable | Mean | SD | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|
| 1. Knowledge | 16.44 | 2.01 | - | | | |
| 2. Self-efficacy | 27.02 | 9.12 | .106* | - | | |
| 3. Attitude | 62.87 | 10.14 | .178** | .317** | - | |
| 4. Practice | 75.43 | 23.35 | .077 | .542** | .284** | - |
| No of Items | | | 18 | 9 | 16 | 28 |
| Reliability (Alpha) | | | 0.700 | 0.916 | 0.868 | 0.955 |

Note: * $p < .05$, ** $p < .01$

The mean score of teachers' responses on the self-efficacy subscales 3.00, which implies a moderate self-efficacy. In terms of attitudes, the mean score value of 3.92 suggests that teachers have relatively positive attitude towards the inclusion of SVI in regular schools.

Regarding the practice subscale, a mean value of 2.69 indicates above average level of practice of the inclusive instructional strategies while teaching SVI at the schools. However, it needs to be noted that some strategies were practiced more frequently than other strategies by school teachers. For instance, some of the strategies that were 'never' practiced by relatively high proportion of teachers include using tactile and concrete materials to teach SVI and using audio equipment for teaching.

**Predicting Practice from knowledge, Self-efficacy and Attitudes**

Preliminary analyses were undertaken in order to validate the pertinent underlying assumptions prior to conducting the hierarchical multiple linear regression test. As suggested by Tabachnick and Fidell (2013), assumptions of normality, linearity and homoscedasticity were satisfied. Examining at the correlations presented in Table 2, independent variables were not highly correlated with each other in which multicollinearity was unlikely to be a problem (Tabachnick & Fidell, 2013). Moreover, the variance inflation factors (VIFs) were found to be within the acceptable range, value under 10, as suggested by Ross and Willson (2017). The dependent variable, practice, has skewness and kurtosis values of -0.558 and -0.253, respectively. As Cohen, Manion, and Morion (2017) stated, these values are within an acceptable range of normal distribution of data.

A four stage hierarchical multiple regression test was conducted using practice as the dependent variable, and knowledge, self-efficacy and attitude as predictor variables after controlling for the demographic profiles of teachers (sex, educational qualification, teaching experience and training on SNE/IE). The demographic variables were entered in the first stage of the hierarchical multiple regression to explore their effect on the teachers' practice of inclusive instructional strategies in teaching SVI in regular schools. Cohen and Cohen (1983) indicated demographic variables as good candidates for initial step entry in to the model. Subsequent stages introduced a new predictor variable to previous models' existing predictor variables. Literatures were consulted to decide the order of entry of the remaining independent variables. The knowledge variable was entered at stage 2, self-efficacy at stage three and attitude at stage four. Table 3 presents the summary of the hierarchical multiple regression statistics.

**Table 3**

*Summary of Hierarchical Multiple Regression Analysis for Variables Predicting Practice*

| Variable | R | $R^2$ | $\Delta R^2$ | B | SE | β | t |
|---|---|---|---|---|---|---|---|
| Step 1 | 0.201 | 0.040 | 0.040 | | | | |
| Sex | | | | -2.382 | 2.342 | -.051 | -1.017 |
| Educational Qualification | | | | -.789 | 1.967 | -.020 | -.401 |
| Teaching Experience | | | | 2.397 | 3.612 | .033 | .664 |
| Training on SNE/IE | | | | 11.566 | 2.980 | -191*** | 3.881 |
| Step 2 | 0.209 | 0.044 | 0.003 | | | | |
| Sex | | | | -2.691 | 2.355 | -.057 | -1.143 |
| Educational Qualification | | | | -.780 | 1.966 | -.020 | -.397 |
| Teaching Experience | | | | 2.388 | 3.610 | .033 | .661 |
| Training on SNE/IE | | | | 11.441 | 2.980 | .189*** | 3.839 |
| Knowledge | | | | .685 | .572 | .059 | 1.197 |

| Variable | R | $R^2$ | $\Delta R^2$ | B | SE | β | t |
|---|---|---|---|---|---|---|---|
| Step 3 | 0.547 | 0.299 | 0.255 | | | | |
| Sex | | | | -3.363 | 2.020 | -.072 | -1.665 |
| Educational Qualification | | | | -1.450 | 1.687 | -.038 | -.859 |
| Teaching Experience | | | | 3.542 | 3.097 | .049 | 1.144 |
| Training on SNE/IE | | | | 4.465 | 2.621 | .074 | 1.704 |
| Knowledge | | | | .180 | .493 | .016 | .366 |
| Self-efficacy | | | | 1.338 | .112 | .521*** | 11.986 |
| Step 4 | 0.560 | 0.314 | 0.015 | | | | |
| Sex | | | | -3.489 | 2.001 | -.074 | -1.743 |
| Educational Qualification | | | | -1.373 | 1.671 | -.036 | -.822 |
| Teaching Experience | | | | 3.795 | 3.069 | .053 | 1.237 |
| Training on SNE/IE | | | | 3.881 | 2.603 | .064 | 1.491 |
| Knowledge | | | | -.054 | .494 | -.005 | -.109 |
| Self-efficacy | | | | 1.237 | .116 | .481*** | 10.679 |
| Attitude | | | | .320 | .109 | .132** | 2.931 |

*Note.* $N = 421$;**$p < .01$, ***$p < .001$

The hierarchical multiple regression revealed that at stage one, the demographic characteristics of teachers (sex, educational qualification, teaching experience, and training on SNE/IE) contributed significantly to the regression model, ($F$ (4,397) = 4.167, $p < .01$) and accounted for 4.0% of the variance in practice. Introducing the knowledge construct at stage two explained an additional 0.3% of variation in practice, and this change in $R^2$ was not significant, $F\Delta$ (1,396) = 1.433, $p>0.05$. Adding self-efficacy to the regression model explained an additional 25.5% of the variance in practice and this change in $R^2$ was significant, $F\Delta$ (1,395) = 143.668, $p < .001$. Finally, the addition of attitude to the regression model explained an additional 1.5% of the variance in practice and this change in $R^2$ square was significant ($\Delta F$ (1,394) = 8.593, $p < .01$). Only self-efficacy and attitude were significant predictors of practice when all the independent variables were incorporated into stage four of the regression model. The most important predictor of practice was self-efficacy (β=.481, p<.001), which uniquely explained 25.5% of the variance in practice. Together all the independent variables accounted for 31.4% of the variance in practice.

## Discussion

The purpose of this study is to assess factors affecting teachers' practice of inclusive instructional strategies in teaching SVI in regular schools of Addis Ababa. Survey items were prepared and validated before assessing responses of teachers on the outcome and the predicting variables. To the best of the authors' knowledge, most of the previously conducted studies documented the effect of knowledge, self-efficacy and attitude of teachers on their inclusive practices considering inclusive education as an umbrella, not particularly focusing on the inclusion of SVI. To this end, the researchers have used previous studies that explained the relationship between the variables of interest in the general inclusive education settings as well as those limited studies conducted on teacher related factors affecting the inclusion of SVI in inclusive education at regular schools.

Mu et al. (2015) underscored that knowledge is one of the professional competences of teachers related to effective teaching approaches. In the current study, teachers have good understanding of the inclusive instruction strategies that could be used in teaching SVI in inclusive education. This finding is consistent with that of a local study conducted by Moti et al. (2018) in which teachers in Nekemte town primary schools were reported to have moderate knowledge about inclusive education. The finding contradicts with the study conducted in Lesotho by Mosia (2014) which revealed that teachers lack understanding about what constitutes an inclusive education.

This study indicated that teachers have above average perceived capability (self-efficacy) to implement the inclusive instruction strategies used in teaching SVI in inclusive education. This outcome is consistent with the findings of a meta-analytical study by Kuyini et al. (2018) and that of Dignath et al. (2022), which discovered that teachers' efficacy regarding inclusion was at a modest level. In contrast, (Hecht et al., 2017; Mandabon, 2023) showed that teachers' self-efficacy in managing students with special educational needs was quite high. The current study documented that teachers have a moderate attitude towards the inclusion of SVI in regular schools. This contradicts with De Boer et al. (2011) who showed that, in general, teachers had from neutral to negative attitude towards inclusive education. The current study also differs with the findings of Ogadho et al. (2015) conducted on Kenyan teachers drawn from Kisumu County that revealed prevalent negative attitudes of teachers towards inclusion and children with disabilities. Similarly, research by Alzemaia (2019) revealed negative attitude of teachers, at pre-training stage, towards inclusive education in Saudi Arabia. Teachers were found to have neutral attitude towards inclusive education in a local study conducted by Moti et al. (2018) in Nekemte town, Ethiopia. The difference in the teachers' attitude between this study and that of Moti et al. (2018) could be attributed to the place of study; in which the previous study was conducted in rural part of Ethiopia. On the other hand, the findings of this study corroborates the results of the study conducted by Johnstone and Chapman (2009) and Zainalabidin and Ma'rof (2021) that documented a moderate level of teachers' attitude towards inclusive education in Lesotho and Malaysia, respectively. The current study is also in line with research conducted by Lola and Musa (2019) in Southern Ethiopia, in which teachers were found out to have a slightly positive attitude towards inclusion of learners with special education needs in regular schools.

This study documented an average level of teachers' practice of the various inclusive instruction strategies in the inclusion of SVI in regular schools. Whereas, studies conducted in local context suggest existence of poor level of practice of inclusive education by school teachers. For instance, Moti et al. (2018) uncovered that primary school teachers rarely practiced inclusive education. Similarly, Geleta (2019) found that the level of implementation of inclusive education in general schools drawn from Sebeta town was very poor.

This study indicated that knowledge is not a significant predictor of teachers' practice, while self-efficacy and attitude were able to predict inclusion practices of teachers in regular schools. The present finding supports the study conducted by Kuyini and Desai (2007), which demonstrated that attitudes towards inclusion significantly predict effective inclusive teaching practices. It also goes in line with that of Zee and Koomen (2016) study which indicates that self-efficacy predicts inclusive practices at schools. It also supports Hofman and Kilimo (2014) that suggested the implementation of inclusive education is more

problematic for teachers who have poor self-efficacy. The current results substantiate the findings of a study by Wray et al. (2022), which emphasized that a major contributing factor to the explanation of the usage of inclusive instruction is higher teacher self-efficacy. However, the findings of the current study do not support the previous local research conducted by Moti et al. (2018) which indicated that knowledge of the teachers significantly contributed to the practice of inclusive education. This study has been unable to demonstrate that knowledge is a significant predictor of inclusive practices as indicated by Kuyini and Desai (2007). There may be certain practical challenges in putting the knowledge of inclusive education strategies into practice, such as large class sizes and resource constraints. Tackling these and other similar practical challenges could help bridge the gap between knowledge and practice in inclusive education.

## Conclusions and Implications

This study set out to determine factors affecting teachers' practice of inclusive instructional strategies considering SVI in regular schools. The study assessed how teachers' knowledge about disability specific inclusive instruction strategies that are used to teach SVI, attitudes towards inclusion of SVI in regular schools and self-efficacy in teaching SVI predict teachers' practice of inclusive instruction strategies in teaching SVI in regular schools.

Important conclusions drawn from this study include: 1) teachers have good understanding of inclusive instructional strategies that can be used in teaching SVI; 2) teachers have moderate level of self-efficacy and favorable attitude towards the inclusion of SVI in regular schools; 3) moderate level of practice of inclusive instructional strategies was documented in the present study; and 4) teachers' self-efficacy and attitude were able to significantly predict their practice of inclusive instructional strategies, while knowledge is not a significant predictor.

The study's findings have important implication to further improve inclusion of SVI in regular schools. School leaders can organize hands-on in-service trainings for teachers on disability specific inclusive instructional strategies used to teach SVI to further improve the level of inclusive practices. Moreover, nurturing self-efficacy and further improving attitude of teachers could result in improved inclusive practices at schools. This could be done at pre-service training level by teacher training institutes and also at in-service trainings arranged at school level. More specifically, short term training on hands on skills that enhance the self-efficacy of teachers is recommended to effectively teach SVI in an inclusive classroom.

### Limitations of the Study

Due to its exclusive focus on teachers from Addis Ababa's primary and secondary schools, this study has a geographic limitation. Future studies could assess the relationship between the study variables in other parts of the country. The study has a limitation in solely relying on self-reported data from the school teachers regarding their knowledge, self-efficacy, attitude and practices. These results therefore need to be interpreted with caution and future studies could consider integrating other type of data like classroom observations. Furthermore, the study does not separately address the results for students with blindness and

low vision. Subsequent research endeavors may potentially tackle this matter for a robust understanding of the subject.

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