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Assessing teacher training college tutor's awareness of learning difficulties at a selected College in Rwanda

[1*]Edmore Chingwe, Sibonokuhle Ndlovu, Webster Mudzingwa, and Nizeyimana Jean
[1,2,3,4]Foundations of Education, Rwanda Basic Education Board, TTC Bicumbi, Rwanda
[1*]Primary author: chingweedmore@gmail.com

Abstract—This study assesses Teacher Training College Tutors' (TTCTs) awareness of three learning difficulties (dyslexia, dyscalculia, and dysgraphia). The study sample consisted of twenty tutors at one Teacher Training College (TTC) in Rwanda. Awareness of learning difficulties was assessed through a mixed-method approach. Data was analysed using thematic and descriptive statistical techniques. Tutors were found to have an overall average awareness score of 85%. The awareness of dyslexia, dyscalculia, and dysgraphia stood at 76%, 84%, and 90%, respectively. Tutors' awareness of strategies for mediating learning difficulties stood at 91%. TTC faced numerous challenges in the teaching and learning of students with learning difficulties. These included inadequate teaching and learning resources, training, and a packed timetable. Although tutor awareness of learning difficulties is high, tutors appear not to know much about some elements. Therefore, TTC should conduct more staff development sessions on learning difficulties in collaboration with relevant stakeholders.

Keywords: Awareness, Dyslexia, Dyscalculia, Dysgraphia, Learning difficulties

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I. INTRODUCTION

THIS study endeavours to examine TTCTs awareness of learning difficulties among tutors at a selected TTC as a pilot project for a more significant study. Learning difficulties, in this case, refer to challenges experienced by students because of neurological differences, leading to difficulty in reading, writing, calculating, and learning new concepts. Adopting the Salamanca Statement in 1994 opened classrooms to students from diverse backgrounds, abilities, ages, races, and other aspects that make them different (Ainscow, 2020; Mezzanotte, 2022). At the centre of inclusive education is a commitment to seeing students of all kinds receive a quality education in the same spaces for social and academic development (UNESCO, 2005). Inclusive classes are also consistent with the realisation of sustainable development goal number four, calling for inclusive, equitable, and quality education by 2030 (United Nations, 2024). Committing to these two critical global policies, the government of Rwanda adopted an inclusive policy framework intended to address students' educational needs in mainstream educational settings (Ministry of Education Rwanda, 2018; World Bank, 2023). TTCs play a key role in equipping future teachers with skills and knowledge for teaching students from diverse backgrounds to ensure the realisation of inclusive, equitable, and quality education. While TTCT's are seized with the task of equipping future teachers with inclusivity concepts, they themselves are also required to be fully conversant with identifying and teaching students with learning difficulties within TTC classroom settings. It is, therefore, imperative to investigate TTCT's awareness of learning difficulties.

II. LITERATURE REVIEW

Dyslexia is a unique neurobiological learning difficulty characterised by difficulties with word recognition, weak spelling, and decoding abilities (Breaux & Eichstadt, 2024). It is a shared global learning difficulty; for example, each classroom in the United States has at least one learner experiencing reading difficulties. At the same time, about 5% to 17% of school-age children live with the condition (Hudson et al., 2007). Although it remains unknown how many people live with dyslexia in Africa, a study carried out in South Africa uncovered that about 40% to 50% of learners lived with the condition (Smythe et al., 2005). Studies carried out in East Africa, where the current study is situated, about 10% and 2% of learners in Kenya and Ghana are said to be living with learning difficulties (Special Attention Project, 2011). It is interesting to observe that dyslexia also co-exist with other learning and cognitive challenges, such as dyscalculia, and dysgraphia (Oklahoma, 2023). Dyscalculia is a specific learning difficulty characterised by challenges in processing mathematical concepts. It is estimated that about 6% of the population lives with dyscalculia (British Dyslexia Association, 2019). Learners with dyscalculia often struggle to make sense of numbers, retrieve arithmetic facts, make calculations, and perform general mathematical reasoning (Desoete, 2019). Dysgraphia is another learning difficulty that makes it difficult for learners to write due to motor weaknesses or cognitive challenges with written expression (Similoluwa & Taofikat, 2023). It is estimated that about 7% to 15% of people have dysgraphia (The Housson Centre, 2024). Learners with dysgraphia may face challenges in forming letters, making them the same size, and spacing them correctly, holding a pencil/pen, leading to hand cramps, spelling, grammar, punctuation, and sentence structure (Ditmar, 2020).

As classrooms embrace students with diverse abilities in line with the concept of inclusivity adopted in 1994, teachers must be immensely aware of learning difficulties. This awareness entails identifying signs of learning difficulties to allow for early diagnosis and intervention (International Dyslexia Association, 2002). TTCT's must have sound knowledge of learning difficulties to systematically screen their students' cognitive abilities and equip prospective teachers with such skills. Zhuang et al. (2021) aver that teachers' involvement in identifying students with learning difficulties depends on their awareness to initiate

the identification process. Unfortunately, it is agreed that teacher knowledge of learning difficulties is minimal in many countries. For instance, Senarath (2016) discovered that while primary school teachers were aware of dyslexia, secondary school teachers had very little knowledge of this learning difficulty in Sri Lanka. Likewise, Alahmadi and Keshky (2019) investigated primary school teachers' knowledge of specific learning disabilities in Saudi Arabia and reported average participant knowledge levels. In Zimbabwe, Tawodzera and Themane (2024) revealed that teachers lack knowledge about learning difficulties, thus hindering them from appropriately supporting students. In the same way, a study conducted in South Africa by Knight (2018) and Szymanski (2024) discovered that only 12 teachers out of a sample of 143 had been trained in special education while only five indicated having experience with students with learning difficulties such as dyslexia. The teachers could not adapt teaching materials and assessments to suit the needs of students with learning difficulties.

To the researchers' knowledge, few studies have been carried out in Rwanda to assess tutors' awareness of learning difficulties. It is the purpose of this study to endeavour to fill in this gap partially.

III. OBJECTIVE OF THE STUDY

This study assesses tutors' awareness of learning difficulties at a selected TTC in Rwanda.

IV. METHODS

Research approach

A mixed-method approach was adopted to assess Tutors' awareness of learning difficulties. This approach was preferred because it blended well with the researchers' subscription to the compatibility notion (Sahin & Ozturk, 2019). The researchers agreed that quantitative and qualitative methods can be used harmoniously in a single study to explore a problem from multiple perspectives (Creswell & Plano, 2017). A mixed method approach was found relevant in this study as it allowed for substantiating quantitative data. Since pragmatic studies are not interested in searching for the truth but in social conceptions of reality, using a mixed methods approach offered an opportunity to gain a more reliable construction of the awareness of learning difficulties by tutors. As Yin (2016) has stated, the triangulation of methods is a relevant and credible procedure that researchers searching for convergence of data can use.

Research paradigm

Moreover, the study was informed by the pragmatic paradigm. Adopting this paradigm was suitable for this study because it allowed for finding practicable solutions to an intricate educational dilemma faced by TTCTs and students in mainstream classrooms. Moreover, pragmatism was preferred as it aligns well with the mixed methods approach, giving the researchers leeway to use positivist and interpretive approaches to understand tutors' level of awareness of learning difficulties.

Research design

Finally, the study adopted a convergent design involving simultaneously collecting quantitative and qualitative data followed by data integration to establish convergences. This design was preferred for its shorter data collection time than sequential methods (Robin et al., 2022). In addition, adopting the convergent design was relevant as it is compatible with a mixed methods study. This design study allowed for offsetting weaknesses inherent in using closed-ended or open-ended questions, thereby boosting rigour.

Population and sample

This study's population comprised all tutors at the TTC, totaling 20 people. Since this was a small population the total sampling technique was used, yielding a sample of twenty respondents (13 males and 7 females). Total sampling is a technique where the number of respondents in a sample is the same as the number of prospective respondents in a population (Jaya et al., 2022).

Research setting

This study was conducted at a TTC in Rwamagana District in the Eastern Province of Rwanda. At the time of data collection, the TCC enrolled five hundred and fifty-five student teachers and twenty tutors. The TTC has four departments: sciences, foundations of education, social studies, and early childhood education. Furthermore, within the foundations of education department is found special needs education. While none of the students had been officially diagnosed with any of the three learning difficulties under study, some tutors confirmed having observed some students with notable challenges in reading, writing, and some basic maths concepts.

Data collection tools

Questionnaire

Quantitative data were generated using a closed-ended questionnaire administered in the morning before interviews were conducted. To improve the validity of the questionnaire, the KR-20 statistic was calculated using the formula $r = (k / (k-1)) * (1 - (sum(p * q) / s^2))$, where 'k' is the number of items, 'p' is the proportion of respondents answering an item correctly, 'q' is the proportion answering incorrectly, and 's^2' is the variance of total scores (Foster, 2021). SPSS version 20 was used to calculate the KR-20 statistic, which gave an acceptable reliability score of *.651*. This means items in the questionnaire measured the same underlying construct, and thus, the tool was deemed reliable.

The questionnaire presented questions focusing on awareness of three learning difficulties (dyslexia, dyscalculia, and dysgraphia), awareness of intervention strategies, challenges faced in teaching students living with learning difficulties, and demographic characteristics. Demographic characteristics covered six areas: age, gender, experience, subject specialisation, professional development, and professional qualifications. In addition, questions were asked to determine awareness of dyslexia (for example, do students who experience serious difficulties in reading see letters and words backward?), awareness of dyscalculia (for example, do students with serious challenges in maths often delay in learning to count?), awareness of dysgraphia (for example, does the work of students with severe difficulties in writing usually have lots of rubbing?), intervention strategies (for instance, is the repetition of instruction recommended for students with learning difficulties?), and challenges faced in teaching students living with learning difficulties (for example is it difficult for tutors to identify indicators of learning difficulties?).

Semi-structured interviews

In addition to questionnaires, interviews with four semi-structured questions focussing on awareness of learning difficulties, challenges faced, and interventions to mediate teaching students living with learning difficulties were carried out with all participants. All the participants were interviewed in the afternoon after completion of questionnaires. Interviews lasted for about twenty minutes, with each researcher interviewing five participants separately in secluded offices. Including interviews in this study enabled the researchers to collect deeper, meaningful, and insightful qualitative data, which helped make sense of the quantitative data collected.

Data analysis

Quantitative analysis

The researcher used descriptive statistics to make sense of the quantitative data strand. To determine the awareness score for each learning difficulty, the number of correct responses was divided by the number of all responses and multiplied by 100. Using their discretion, researchers considered the awareness scale as low (less than 50%), average (between 50 and 75%), and high (more than 75%). Key challenges faced difficulties by tutors were established by the percentage of respondents who concurred with the statements. Subsequently, results were integrated and presented as descriptions, excerpts, graphs, and frequency tables.

Reflective thematic analysis (RTA)

This study employed the reflexive thematic analysis (RTA) technique

to analyse the qualitative data strand (Braun & Clarke, 2022). Using RTA entailed the following six stages: familiarising with data, generating initial codes, generating initial themes, appraising themes, and defining and naming themes, leading to producing a report (Campbell, 2021). These stages did not necessarily follow a linear format. Before acquainting themselves with the qualitative dataset, researchers were involved in an iterative process of reflexivity to minimise biases that could compromise the findings' trustworthiness (Berger, 2015). This involved engaging in several discussions throughout the research process to expose biases. Furthermore, to improve the reliability of the quantitative data strand, the KR-20 statistic was calculated. In other words, the study's rigor was improved by triangulating data collection techniques to offset the weaknesses of one method with the strengths of the other.

Ethical considerations

In line with ethical standards, researchers sought permission from the college administrators to conduct the study, which they used to obtain informed consent from respondents (Peel, 2020). Respondents were coded and referred to in this study using pseudonyms to conceal their real identity. In both instruments and the final report, the researchers endeavoured to use inclusive language such as gender-neutral pronouns like 'their' and using exact age ranges like 25 to 35 years old than people over 25 years. Inclusive language implies courteous language and encourages the recognition and value of all people (APA, 2021). Such language is free from words, phrases, or tones that humiliate, offend, exclude, label, or belittle people on the grounds of their affiliation to a specific group; for instance, instead of saying *dyslexic students*, the study uses *students living with dyslexia* (UQ Guide, 2022).

V. RESULTS

Demographic characteristics

All the respondents possessed entry professional qualifications for teaching at a teachers' college. Over 80% of the tutors had a bachelor's degree, while 10% had postgraduate degrees in education. This data implies that all the respondents had potentially received some basic training relating to learning difficulties and could thus provide credible and comprehensive information on learning difficulties. Moreover, respondents were drawn from almost all subjects taught at the teachers' college, although most came from maths, sciences, and special needs education. This representation suggests that all respondents were likely to have experienced learning difficulties and to be aware of learning difficulties most noticeable in language education, special needs education, and numerical subjects.

In addition, more than 90% of tutors had at least one or more years of teaching, suggesting they had sufficient experience to have handled and experienced learning difficulties in classroom settings. Finally, table 1 shows that 35% of the tutors had never received any post-professional training on learning difficulties, while 40% received it between one and three times. While there are others who received training between four and more times, the number of those who never received training is substantial and worrisome. Such information denotes that a sizeable number of tutors may not be sufficiently informed to teach students living with learning difficulties, let alone train prospective teachers on doing that.

Awareness of dyslexia (difficulties in reading)

Table 1: Awareness of dyslexia

	Items	Responses	*N*	%
1	I can easily identify students who experience serious difficulties in reading.	Yes	17	85
		No	3	15
2	Students who experience serious difficulties in reading see letters and words backwards.	Yes	15	75
		No	5	25
3	Students who experience serious difficulties in reading have problems copying written language.	Yes	15	75
		No	5	25
4	Students who experience difficulties in reading have confusion in the sequence of letters and symbols e.g., 18 and 81, b and d.	Yes	16	80
		No	4	20
5	Students who experience serious difficulties in reading are often too good at creative thinking.	Yes	8	40
		No	12	60
6	Students who experience serious difficulties in reading often can understand visual information.	Yes	12	60
		No	8	40
7	Students who experience serious difficulties in reading also have problems with spelling.	Yes	17	85
		Yes	3	15
8	Students who experience serious difficulties in reading take longer than normal to complete written work.	Yes	19	95
		No	1	5
9	Students who experience serious difficulties in reading also have difficulties in following oral and written instructions.	Yes	15	75
		No	5	25
10	Students who experience serious difficulties in reading easily get confused.	Yes	18	90
		No	2	10
11	Overall awareness score	Yes	152	76

Table 1 shows that tutors have substantial awareness of reading difficulties commonly associated with dyslexia as answers to nine of the ten statements indicating the characteristics of dyslexia above had between 60% and 90% affirmation, giving an overall awareness score of 76%. However, one statement suggesting that students experiencing serious difficulties in reading are often too good at creative thinking had a low affirmation rate of 40%, indicating that tutors may not be aware of this characteristic commonly prevalent among dyslexics. These findings are also affirmed qualitatively, as shown by statements from two participants below.

"…while I may not say it is easy to identify students who live with dyslexia, I often realise that students who struggle to read struggle also face challenges in spelling" (Participant X^{17}).

"… I am not too familiar with what dyslexia is, but in my subject area, I have often noticed that students who fail to read word problems may also not easily understand instructions given by the tutor, whether written or spoken" (Participant X^{13}).

It can therefore be said that while tutors may be aware of difficulties in reading among students through experience and basic professional training, they may not be fully abreast with the nature of dyslexia and may thus need specialised staff development on the matter.

Awareness of dyscalculia (difficulties in numeracy)

Table 2: Awareness of dyscalculia

Items		Responses	*N*	%
1	Students with serious challenges in maths have difficulty recognising numbers.	Yes	19	95
		No	1	5
2	Students with serious challenges in maths often delay in learning to count	Yes	19	95
		No	1	5
3	Students with serious challenges in maths struggle to connect numerical symbols (5) with their corresponding words (five.	Yes	18	90
		No	2	10
4	Students with serious challenges in maths have difficulties recognising patterns and placing things in order.	Yes	17	85
		No	2	15
5	Students with serious challenges in maths often lose track when counting.	Yes	18	90
		No	2	10
6	Students with serious math challenges often need visual aids like fingers to help count.	Yes	20	100
		No	0	00
7	Students with serious challenges in maths have problems using traditional wall clocks.	Yes	14	70
		No	6	30
8	Students with serious challenges in maths have problems telling the left from right.	Yes	8	40
		No	12	60
9	Students with serious challenges in maths have difficulties counting backward.	Yes	18	90
		No	2	10
10	Students with serious challenges in maths have difficulties estimating distance.	Yes	17	5
		No	3	15
11	Overall awareness score	Yes	168	84

Table 2 shows that respondents confirmed nine of the ten statements presenting some common characteristics of dyscalculia at between 70% and 100%, giving an awareness score of 84%. It can be concluded that tutors have considerable awareness of dyscalculia. This is also confirmed by qualitative data, as shown below.

"Even at Teachers College, students challenged in math may still need to use their fingers or other objects to help them count" (Participant X^{12}).

"For sure, some students who face challenges in math may not easily tell which is left or right, North or South. They may become disoriented since they face challenges in telling direction. This can make them easily get lost even in familiar spaces" (Participant X[17]).

However, one characteristic of dyscalculia is that students with serious challenges in maths may have problems telling the left from right, which received the least affirmation at 42%. This might show that tutors may not have experienced or been unaware of this challenge, but it does not necessarily mean their awareness of dyscalculia is too narrow.

Awareness of dysgraphia (difficulties in writing)

Table 3: Awareness of dysgraphia

	Items	Response	*N*	%
1	Work of students with serious difficulties in writing often has lots of rubbing.	Yes	18	90
		No	2	10
2	Work of students with serious difficulties in writing often has lots of cross-outs.	Yes	16	80
		No	4	20
3	Work of students with serious difficulties in writing often has poor spacing between letters and words.	Yes	20	100
		No	0	00
4	Work of students with serious difficulties in writing often show letter and number reversals beyond early stages of writing.	Yes	19	95
		No	1	5
5	Students with difficulties in writing often produce work with a mixture of upper and lowercase letters.	Yes	18	90
		No	2	10
6	Students with serious difficulties in writing often experience heavy pressure and hand fatigue when writing.	Yes	16	80
		No	4	20
7	Students with serious difficulties in writing are often slow in writing and copying.	Yes	18	90
		No	2	10
8	Students with serious difficulties in writing are often slow to write in legible or illegible handwriting.	Yes	19	95
		No	1	5
9	Students with difficulties in writing often have difficulties following lines or staying within margins when writing.	Yes	18	90
		No	2	10
10	Students with difficulties in writing often produce work with a mixture of printed and cursive letters.	Yes	18	90
		No	2	10
11	Overall awareness score	Yes	180	90

All respondents concurred with the ten statements describing some of the presentations of dysgraphia, with between 80% and 100% giving an overall awareness score of 90%. This implies that most tutors have a wider awareness of this learning difficulty through experience or training. However, there are still a few other characteristics through which dysgraphia presents itself, which they still need to be aware of, such as pressure and hand fatigue when writing. Qualitative data also confirm these findings, as shown below.

"One of the signs that tell me that a student has challenges in writing is the poor spacing between letters and words in written work" (Participant X[16]).

"…there is often a lot of rubbing and cancellations in the work of students living with difficulties in writing" (Participant X[1]).

TTCTs' challenges encountered in teaching students living with learning difficulties

Table 4: Challenges faced by TTCTs' in teaching and learning

	Items	Responses	*N*	%
1	Tutors do not have enough teaching and learning resources to assist students with learning difficulties.	Yes	16	80
		No	4	20
2	There is high demand for the completion of syllabus.	Yes	19	95
		No	1	5
3	It is difficult for tutors to identify indicators of learning difficulties.	Yes	12	60
		No	8	40
4	Tutors have too many responsibilities to be able to fully assist students with learning difficulties.	Yes	19	95
		No	1	5
5	It takes too much time to develop friendly instructions for students with learning difficulties.	Yes	14	70
		No	6	30
6	Large class sizes make it difficult to attend to individual students with learning difficulties.	Yes	19	95
		No	1	5
7	Tutors have inadequate training on learning difficulties.	Yes	17	85
		No	3	15
8	The timetable is too packed to allow for remediation.	Yes	16	80
		No	4	20
9	Tutors lack support from educational administrators.	Yes	14	70
		No	6	30
10	Assessment systems and policies make it difficult to assist students with learning difficulties.	Yes	14	70
		No	6	30

Table 4 shows that tutors experience many challenges while teaching students with learning difficulties as they confirmed all the ten statements depicting possible challenges faced by between 60% and 95%. The most confirmed statements, standing at 95%, relate to high demand for completion of syllabus, too many responsibilities to be able to fully assist students with learning difficulties, and large classes, which make it difficult for tutors to attend to individual students with learning difficulties. It is worrisome that 60% confirmed that tutors find it challenging to identify learning difficulties. This finding makes sense as 85% confirmed that tutors had inadequate training on learning difficulties. Amidst this, 70% confirmed that support from the administration was not satisfactory. These findings were further corroborated qualitatively as shown by two excerpts below as tutors averred that the structure of the curriculum as reflected by a packed timetable and strict adherence to syllabus completion, summative assessments, and the traditional culture of competition in getting high marks and passing rates did not support the accommodation of students with learning difficulties.

"…classes are significant, making it difficult for a tutor to attend to individual needs of students with special needs like difficulties in understating maths concepts. (Participant X[17]).

"…tutors are always under pressure to complete the syllabi on time without fail in preparation for examinations. I can say our syllabi for Foundations of Education is long. Also, although we adopted a competence-based curriculum, the demand for high pass rates compared with other TTCs or other subjects makes us concentrate less on those lagging or needing extra attention" (Participant X[9]).

About 60% confirmed that tutors find it challenging to identify indicators of learning difficulties, while 85% concurred that tutors may not be sufficiently trained in learning difficulties. Confirming these quantitative findings, two tutors responding to interview questions said:

"As tutors, we may not be fully skilled to detect and screen students for learning difficulties. There is no common awareness on how to do it" (Participant X[1]).

"…we are not trained to identify students with learning difficulties. A few tutors, especially from Special Needs Education, may have this knowledge, but it may not be easy to find a tutor who can do that in the sciences. For example, we lack this training to identify students with mathematics learning difficulties. Because of this, tutors usually regard students who do not do well in maths or science as lazy" (Participant X[19]).

Furthermore, Table 4 indicates that 80% of tutors confirm that the College's timetable is too packed to allow for remediation while acknowledging that they do not have enough teaching and learning resources to assist students with learning difficulties. These findings were substantiated qualitatively, with most tutors lamenting the lack of time and resources to fully teach students with learning difficulties, as shown by two quotes below extracted from interviews.

"…students learn from 8am till 5pm daily. There is little time for remediation" (Participant X[11]).

"…although there is generally limited teaching and learning resources, the situation is more acute regarding specialised teaching and learning resources for students with learning difficulties" (Participant X[9]).

These findings imply considerable gaps in tutors' awareness and skills in handling learning difficulties. Such gaps also mean that some students with learning difficulties may not receive adequate support from tutors. At the same time, prospective teachers may not be sufficiently trained to deal with learning difficulties in the future.

Interventions

Table 5: Interventions

	Items	Responses	*N*	%
1	Teaching methods that appeal to many senses (sight, smell, hearing) are helpful for students with learning difficulties.	Yes No	17 3	85 15
2	Using technological resources such as computers, calculators, and smart boards can help students with learning difficulties.	Yes No	19 1	95 5
3	Providing mentors and special educators for students with learning difficulties can be helpful.	Yes No	19 1	95 5
4	Repetition of instruction is recommended for students with learning difficulties.	Yes No	17 3	85 15
5	Using games to connect concepts to everyday activities can be helpful for students with learning difficulties.	Yes No	20 0	100 00
6	Using real life examples e.g. counting fruits can help student with learning difficulties.	No Yes	20 0	100 00
7	Using graph paper, writing paper with lines and margins can help students with learning difficulties.	Yes Yes	17 3	85 15
8	Varying assessment methods can help students with learning difficulties.	Yes No	20 0	100 00
9	Allowing students to take pictures of lecture notes to review later may help students with learning difficulties.	Yes No	15 5	75 25
10	Allowing extra time on tests can help students with learning difficulties.	Yes No	18 2	90 10
11	Overall awareness score	Yes	182	91

Most respondents concurred with the ten methods suggested in Table 5 by between 75% and 100%, giving an overall awareness score of 91%. Three methods, including the use of games, real-life examples, and varying assessment methods, were considered helpful in teaching students with learning difficulties by all the respondents. In addition, most tutors supported statements consenting to accommodations for students with learning difficulties, such as allowing them extra time during assessments. These findings were also confirmed during interviews, as shown by the three participants below.

"…using more student-centered methods such as problem-based learning, games, and projects relating to real-life experiences which students can do at their own pace can help to improve outcomes of some students with difficulties in mathematics, for instance" (Participant X^{6}).

"Since we adopted CBC, we should be willing to broaden assessments to include those accommodating students with learning difficulties rather than rely on the traditional knowledge-based summative assessments" (Participant X^{11}).

"…need to reach a point where we can also provide accommodations for students with learning difficulties as is done in other countries and for students living with physical diversities" (Participant X^{2}).

However, 5% to 15% of the respondents disagreed with some of the approved interventions, raising questions on their awareness of teaching methods most applicable for addressing learning difficulties and how and what they teach prospective teachers. Most interesting is the multi-sensory teaching methods statement, with the highest 15% of respondents disagreeing with its utility in teaching students with learning difficulties. This is one of the most recommended and used interventions. Thus, these results imply that there are gaps in the knowledge and awareness of respondents on ways of addressing learning difficulties in classroom settings.

VI. DISCUSSION

In this study, tutors' awareness of the three learning difficulties (dyslexia, dyscalculia, and dysgraphia) was high based on the researchers' awareness scale. However, although respondent's awareness scores were high, there are some key elements that respondents appeared not to know much about relating to identification and teaching strategies for students with learning difficulties. This is in harmony with findings by earlier studies that while teachers may have some awareness of learning difficulties, there remained some areas they were not familiar with (Acheampong et al., 2019). Such gaps may be due to the lean staff development on learning difficulties. Quite a sizeable number of respondents reported never receiving post-professional training on learning difficulties. In contrast, most of those who got some training only got so between one and three times. With an average teaching experience of about three years, 65% of respondents received staff development training on learning difficulties at least thrice in their careers.

In addition, the several barriers' tutors face in teaching and learning processes identified in the study could also discourage the tutor's readiness and eagerness to learn more about learning difficulties. These results imply that some students with learning difficulties may not be handled effectively, consequently affecting their learning outcomes. Furthermore, it may also mean that student teachers may not be sufficiently equipped to deal with learning difficulties in the future. Awareness of learning difficulties is key for effective teacher training, teaching, and learning processes. Indeed, intense awareness of learning difficulties could help dispel misconceptions about learning difficulties, promote access to support services, and improve outcomes for teacher training processes and student teachers living with learning difficulties. Also key in this study are challenges faced by tutors in teaching students living with learning difficulties and training student teachers in best practices for mediating learning difficulties. Large class sizes, inadequate teaching and learning resources, insufficient training on learning difficulties, and a packed timetable were some of the challenges faced by tutors inhibiting them from effectively teaching students living with learning difficulties and consequently training future teachers on best practices for handling students with learning difficulties.

VII. CONCLUSION

The findings reveal that Tutors at the selected TTC are aware of what learning disabilities are. However, there are some gaps in their awareness. It is also shown that several factors affect the effective application of their knowledge in teaching students with learning disabilities. In this light, it is recommended that the Teacher Training College should make deliberate efforts to conduct continuous staff development on learning difficulties with the help of relevant Ministries, Departments, and partners. Furthermore, the TTC should have a clear implementation plan of inclusive policies within its programmes concerning learning difficulties. To monitor the implementation of inclusive learning difficulties policies, the College administration, with the help of education officers, should consider checking such in their routine supervision. Administrators at the College should endeavour to empower Tutors to screen students for learning difficulties for further management by experts. There also should be efforts to collect primary school exit profiles for students joining the College to detect those with learning difficulties easily. In consultation with relevant authorities, the College administration should consider integrating screening for learning difficulties into the Teacher Training curricula.

VIII. CONFLICTS OF INTEREST

There are no conflicts of interest in this study.

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