



FACULTY OF EDUCATION
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CHALLENGES AND COMPETENCE IN TEACHING IN INCLUSIVE CLASSROOMS IN RWANDA

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Examiner:	Girma Berhanu

Abstract

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Aim: The study explores Rwandan teachers' perspectives on competencies they have for teaching in inclusive classrooms, the support teachers need to develop their competencies, and the challenges they face in inclusive schools in Rwanda.

Theory: Danielson's Framework for Teaching builds the theoretical framework for this research. It is a valuable tool for defining good teaching and provide consistency of teacher's competencies. The theory describes '*what teachers should know and be able to do*' in their teaching profession in inclusive schools. It helped in structuring an interview guide and in making sense of data gathered on my research topic.

Method: The study used a qualitative approach based on purposive sampling, whereby semi-structured interviews were held with seven secondary teachers working in inclusive schools in Rwanda. The data collected from seven teachers were analyzed through thematic analysis by transcribing, coding, categorizing. A thematized synthesis of coded data provides for the study's results.

Results: The results revealed that secondary teachers have different competencies and face serious barriers when teaching students with multiple abilities, disabilities, and special educational needs in the same classroom. The teachers have aspirations concerning learning enhancement and outcomes for all students (with and without disabilities). They believe that all children can make progress. Teachers elucidated that (1) using different teaching methods like teaching students in constructivist manners -learner-centered methods, storytelling, roleplay; (2) good communication with all education stakeholders; (3) to be able to maintain the behaviors of students; and (4) designing and using assessments in teaching and keeping accurate data to monitor student's progress in learning, are appropriate competencies for teaching inclusive classrooms. Despite all the crucial competencies, they need support to develop and strengthen their competencies, such as (i) continuous training about how better to engage and interact with disabled students; (ii) maintaining their behavior and their inclusion in co-curricular activities, (iii) education on sign language and on manipulating special devices (for instance, braille machines); (iv) sign language books (also on grammar). They also made it clear that they have not been prepared or trained to teach deaf and blind students, and it seems deaf students are socially and academically excluded due

to an inappropriate learning environment. In keeping with the reported challenges, teachers in Rwanda can achieve some inclusion, but not the inclusion of all.

Foreword

Almighty God, thank you for life and your protection during my academic journey!

This thesis emerges from the belief that there is a need to increase the quality of education and learning outcomes for all Rwandan children by assessing teachers' capabilities to evidence their skills and establish their competencies. Furthermore, I am interested in the angle of inclusive education since it relates to sustainable development goals and Rwanda's targets and plans about ensuring inclusive and quality of education and lifelong learning for all children. Besides, I wish all children with and without disabilities be adequately served through receiving quality teaching.

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Acronyms

12YBE: Twelve Year Basic Education

9YBE: Nine Year Basic Education

CPD: Continuous Professional Development

CRC: Convention on the Rights of the Child

CRPD: Convention on the Rights of People with Disabilities

EFA: Education For All

ESSP: Education Sector Strategic Plan

HEC: Higher Education Council

ICT: Information and communications technology

IE: Inclusive Education

IMER: International Master's program in Educational Research

MINECOFIN: Ministry of Finance and Economic Planning

MINEDUC: Ministry of Education

NISR: National Institute of Statistics of Rwanda

NST-1: First National Strategy for Transformation

REB: Rwanda Education Board

RP: Rwanda Polytechnic

SEN: Special Educational Needs

SDGs: Sustainable Development Goals

TVET: Technical and Vocational Education and Training

UN CRPD: United Nations Convention on the Rights of Persons with Disabilities

UNESCO: United Nations Educational, Scientific and Cultural Organization

UR: University of Rwanda

WDA: Workforce Development Authority

1. Introduction

The concept of inclusive education implies equal opportunities for all students and children to access school education in mainstream schools without any form of discrimination. Educators contribute a lot to the success of inclusive settings by providing good teaching. And their support plays an essential role in accommodating all students, including those with special educational needs (SEN) and disability, in ordinary schools (Leifler, 2020; Rusznyak & Walton, 2017; Šmelová et al., 2016). For this reason, teachers are supposed to have the supports and appropriate competencies to teach efficiently and accurately in inclusive classrooms and to fight against any problems and challenges that may arise in inclusive settings (Danielson, 2007; Illeris, 2009). In the case of Rwanda as elsewhere, there are however still different challenges standing in the way of achieving fully inclusive schools. These include, for example, the need for regular assessment of teachers in terms of their inclusive education skills (Ministry of Education-Rwanda, 2019). This study highlights teachers' own perspectives on their competencies and inquires into the support that teachers say they need in order to develop their inclusive education skills. It will also report on the daily challenges they face while teaching in inclusive classes in Rwanda to see what common and particular barriers present themselves.

The present chapter provides the background to and context of the study. It will set out the reasons for Rwanda pursuing the inclusion of children with SEN in mainstream schools and look into the development of inclusive education in Rwanda. Further, I will describe why and when Rwanda became a signatory to United Nations Conventions concerning inclusive education and how Rwanda values inclusive education in schools and in the community through its stated targets and education sector strategic plan. After that, the problem statement will define the problem to be addressed in this study. The chapter will close with the study's main research questions.

The literature review, together with the theoretical framework, constitutes the second chapter. It reports on what teacher's competencies are needed for an inclusive school, lists the challenges for implementing inclusive education in schools as were identified in earlier research, and identifies the recommendations for improving inclusive education that were offered. A brief literature review will highlight the meaning of the main concepts. The methodological chapter described the methodology used for the present study, including the tools used for collecting data and doing the analysis. The results chapter highlights teachers' current competencies and their capacity for professional growth towards designing inclusive learning experiences for their students. It identifies the support teachers say they need and lists the daily challenges teachers face in teaching inclusive classes. The discussion chapter indicates the connection between data and literature review. It identifies what data and findings from the present study contribute to the literature and what is known to date. The last chapter's conclusions and recommendations will identify lessons learned and set out goals for further research.

1.1. Background

Persons with special needs and disabilities are all over the world at all levels in every society. Various arguments have been put forward on how best to educate children with special educational needs (Wang, 2009). For instance, during the 1970s, some countries like Italy and New York started to include children with different special needs and disabilities in public schools (Crockett, 2015; Ianes et al., 2020). Further, since the 1980s, in the UK mainstream schools, the number of disabled children has significantly boosted (Webster & Blatchford, 2013). The purpose of that inclusion was to teach all students together in inclusive classes complemented by special education classes to address a range of their multiple special educational needs and lead them to more productive lives (Crockett, 2015; Ianes et al., 2020).

The publication of the UNESCO Salamanca World Statement 1994 on special needs education was a global watershed document in relation to inclusive education. It called for essential reform of mainstream schools worldwide to make possible the principle of inclusive education, remove the discrimination, and support students to obtain an equitable quality education and level of learning (Ainscow et al., 2019; Lindsay, 2003). It suggested making a significant adjustment in government policy and planned direction for education systems worldwide. And with the sweeping global and ongoing reform that the Salamanca statement has triggered since it appeared, teachers all around the world need to develop their professional competencies in the direction of inclusive education.

According to Ainscow et al. (2019, p.2) and Ainscow (2020, p.9), the importance of moving to an inclusive education system have generally been understood through the following three justifications:

“An educational justification: the requirement for inclusive settings to educate all children together means that they (teachers) have to develop ways of teaching that respond to individual differences and that, therefore, benefit all children.

A social justification: inclusive schools can change social attitudes by educating all children together and creating the basis for a just and non-discriminatory (community) society

An economic justification: it is likely to be less costly to establish and maintain schools which educate all children together than to set up a complex system of different types of school”.

Developed and developing countries enacted the concept of inclusive setting where children with special needs receive teaching appropriate to their ability and interests without discrimination (Ainscow et al., 2006; Magnússon, 2019). All children with a range of special educational needs have access to mainstream primary and secondary schools/universities. The ordinary schools are still being reorganized in such a way to make this possible. Besides, the integration of children perceived to have special educational needs in regular school guides parents to make other choices for their children (Croll & Moses, 2000; Education UNESCO, 1994; Norwich, 2014; UNESCO, 2001; Wade & Moore, 1992).

Currently, there is progress in inclusive education to develop the ways of teaching and to eradicate impediments restricting the interest and performance of all children, capacities, and access to quality

education; and elimination of all types of segregation in the learning environment to benefit all children (Ainscow et al., 2019; Yadav et al., 2015). Rwanda has made significant progress by ratifying the ‘Convention on the Rights of the Child (CRC)’ in 1990 and signing the United Nations Convention on the ‘Rights of Persons with Disabilities (UN CRPD)’ in 2008. The signing of the UN CRPD marked national gratitude for the rights for persons with disabilities by providing equality of opportunity, accessibility to quality education without discrimination, no one is left behind, all participate fully and effectively in national development, and inclusion in society and schools (Njelesani et al., 2018; UNESCO, 2017). Rwanda also initiated the First National Strategy for Transformation 2017–2024 (NST-1) as the primary stage to achieve its objectives of becoming *a low middle-income country by 2024, a ‘middle-income country by 2035, and a high-income country by 2050’* and making progress toward achieving the SDGs goals for ensuring equitable quality education for all (Gubic & Baloi, 2019; MINECOFIN, 2018; Ministry of Education-Rwanda, 2019; Niyonzima & Bhujju, 2021; Price, 2019). Besides, the government of Rwanda, through the Ministry of Education, has been calling since 2007 for inclusive education in public and private settings or schools to enable all Rwandan students with Special Educational Needs (SEN) to access the same educational services as their regular peers and siblings (Karangwa, 2014). The National Constitution of 2003 that amended in 2015, present reviewed policy on Special Needs Education (SNE) and Inclusive Education (IE) articulate the right to education for all, including the most vulnerable people of the community such as minorities individuals (Ministry of Education-Rwanda, 2018, 2019; Republic of Rwanda., 2018). And avoid discrimination propaganda based on physical, mental, skin color, or any disability.

1.2. Rwanda education system

Rwanda's education system has made significant changes and improvements in education since 1994. The Republic of Rwanda takes education as a fundamental human right and an essential way to ensure all Rwandan citizens realize their full potentials with adequate and appropriate skills (Fund, 2006; Ministry of Education-Rwanda, 2019; UNESCO, 2001).

The formal education system of Rwanda is into four main tiers: “*pre-primary, primary, secondary, and higher education.*” There is a critical ‘TVET stream’ at both optional (secondary) and advanced (higher) education levels (Ministry of Education-Rwanda, 2019). Adult education is non-formal education. ‘*Technical and Vocational Education and Training (TVET)*’ in Rwanda provides youth and unemployed people with the skills to develop productive employment and provides workers (including entrepreneurs) with an opportunity to enhance their capabilities (Ministry of Education-Rwanda, 2019). TVET is delivered officially in three institutions, namely: *Vocational Training Centres (VTCs), Technical Secondary Schools (TSSs), and Integrated Polytechnic Regional Colleges (IPRCs)* (Ministry of Education-Rwanda, 2019).

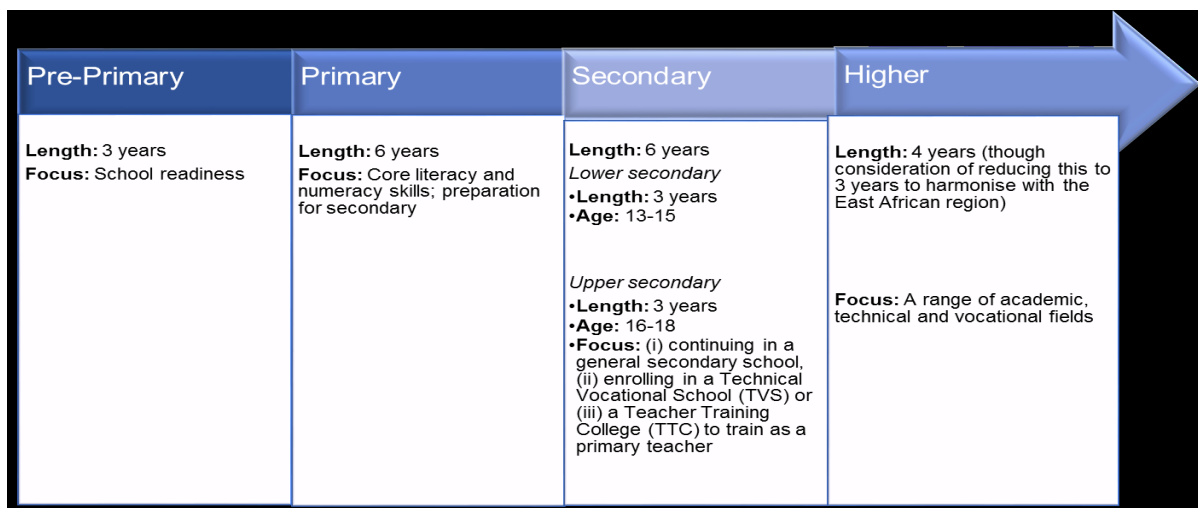


Figure 1: Rwandan education system structure

Source: (Ministry of Education-Rwanda, 2019, p.107).

In Rwanda, pre-primary education requires three years to complete, and school readiness is the focus of this stage. Primary education requires six years to complete, and instructions focus on core literacy and numeracy skills. Secondary education level is into two levels with six years in length. The lower secondary level (or ordinary level) is three years to finish and three years for the upper secondary level (or advanced level). Higher education involves students learning four or five years to graduate, depending on the nature of the program. To move from one education level to another, students should pass a national examination administered by the National examination council. At the pre-primary educational level, it is not compulsory. The children start pre-primary education aged 3years old. For the primary, a child should have at least six years. The age of admission in secondary education is at least 12 years.

Rwanda has three types of schools that differ with respect to their ownership and management. There are public schools that are usually constructed and run using public money, government-aided schools that are government-supported private schools in some way, and private (independent) schools (Lewis, 2009; Ministry of Education-Rwanda, 2019). They may furthermore be rural or urban schools.

School status	2016	2017	2018	2019
Total Classrooms	16,797	17,081	17,972	18,686
Public	5,110	5,269	5,718	5,958
Government aided	9,086	9,312	9,566	9,842
Private	2,601	2,500	2,688	2,886
Average students per Classroom	33	35	36	39
Public	34	35	37	40
Government aided	33	36	38	42
Private	30	30	29	29

Table 1: Total classrooms and Class size by school status from 2016 to 2019

Source: (MINEDUC -Rwanda, 2019, p.55).

The above table shows the total classrooms in each type of school and the average size of students per classroom from 2016-2019. These numbers are for the Secondary education level only. For other education levels, see (MINEDUC -Rwanda, 2019).

Furthermore, since 2016, there has been a crucial transition from a ‘knowledge-based curriculum’ to a ‘competency-based curriculum’ at primary and secondary education level and knowledge and skills acquisition to knowledge creation and application (Ndiokubwayo et al., 2019; Ndiokubwayo & Habiyaremye, 2018; Ngendahayo & Askill–Williams, 2016). A competency-based curriculum “takes learning to higher levels by providing challenging and engaging learning experiences which require deep thinking rather than just memorization” (Rwanda Education Board, 2015, p.7). It focuses on what young people can do and applying knowledge to significant issues or problems (Rwanda Education Board, 2015). The Rwanda Education Board (REB) introduced this new curriculum due to the skills that students need to gain while in college. Schools seem to be of little relevance to skills required outside the classroom. The new curriculum seeks to fulfill better students’ autonomous development, lifelong learning habits, appropriate skills, and knowledge (Ndiokubwayo & Habiyaremye, 2018).

The Ministry of Education (MINEDUC) has overall responsibility for policymaking, educational planning, coordination of the education sector at the national level (Ministry of Education-Rwanda, 2019). The education sector activities in Rwanda are monitored and evaluated by key agencies like ‘Rwanda Education Board (REB), the Workforce Development Authority (WDA), the Rwanda Polytechnic (RP), the Higher Education Council (HEC), the University of Rwanda (UR)’ (Ibid, 2019). Progress made within the education system is assessed via quarterly reports (Ministry of Education-Rwanda, 2019).

Further, through MINEDUC -Rwanda has identified the need for regular assessment of learners’ and teachers’ competencies as a strong focus or strategy for quality education improvement. This strategy was announced in an extraordinary cabinet meeting on 28th January 2019 (Ministry of Education-Rwanda, 2019).

1.3. Inclusive education in Rwanda

Rwanda has foregrounded its people as its irreplaceable and valuable key resource for attaining socio-economic development objectives (Republic of Rwanda, 2018). The improvement of relevant knowledge, skills, and attitudes of Rwandans contributes to the socio-economic life of the nation. Skilled people are therefore seen as critical to a well-functioning and burgeoning national labor market (Republic of Rwanda, 2018).

Inclusive education in Rwanda is aligned to the national vision of achieving equal access to quality education for all youngsters and children regardless of their differences and their educational needs; and to help them to be productive and valued in the Rwandan community (Ministry of Education-Rwanda, 2019). Rwanda has therefore committed to international development targets in education, such as the UN’s Education for All, to expand equal and quality educational opportunities for all children, young people, and adults (Fund, 2006; Republic of Rwanda, 2002; UNESCO, 2007). Education for All is a worldwide commitment to providing equal opportunities and learning needs for all children, young

people, and adults (UNESCO, 2009; Zwane & Malale, 2018). This commitment has facilitated educational access for all students in mainstream schools, especially the basic level for students with disabilities and those classified as having special educational needs (Karangwa et al., 2010).

Inclusive education policies are developed in a more culturally appropriate way to make it easier understood, accepted, and implemented (Lewis, 2009; Ministry of Education-Rwanda, 2018, 2019). And all schools are required to become more inclusive to ensure that both children and young people are registered and actively engaged (Ministry of Education-Rwanda, 2019, p.43).

Three million seven hundred fifty-six thousand nine hundred forty-two (3,756,942) students in total were registered in the Rwandan education system in 2019 (MINEDUC -Rwanda, 2019, p15). Inclusive schools in Rwanda are however not greatly populated with diverse students with SEN; because provisions and support for a range of disadvantaged students with SEN are not adequate (Karangwa, 2014; Ministry of Education-Rwanda, 2018, p14). The available provisions for special students are moreover mainly found in urban areas (Lewis, 2009).

Students considered to have special educational needs in Rwanda are all those with different types of physical, sensory or mental disability, all other groups that face difficulties in education, children with learning disorders, as well as gifted and talented learners (the Republic of Rwanda, 2007). In 2019, around 1,931 out of the overall 282,430 children registered in pre-primary education were reported as having a disability such as hearing, vision, physical, speaking, learning, and this represents 10% of students with a disability registered in Nursery schools (MINEDUC -Rwanda, 2019; Ministry of Education-Rwanda, 2019). The 16,021 students with disabilities out of 2,512,465 enrolled in primary schools and represented 0.6% of students enrolled in primary schools. The enrolment of students with SEN at the secondary level is 4,267 in 2019. The 459 students (trainees) with SEN are in Technical Vocational Training (TVT) school. For total enrolment in higher education institutions, 110 students enrolled as having SEN. Compare the number of tertiary students with disability with those of secondary schools, few students with a disability enter the higher level of education (MINEDUC -Rwanda, 2019; Ministry of Education-Rwanda, 2019). Parents are sensitized to send their all children together with those with a disability at school and on time.

The Special Needs & Inclusive education Strategic Plan (SN&IE 2018/19-2023/24; hereafter referred to as SN&IE) has identified the goals that need to be achieved in order to improve the quality of and access to education services for all students: 1) Promoting access, retention, and completion of 12 years of schooling by students with special educational needs; 2) Improving the quality of SN&IE services; 3) Developing schools of excellence in SN&IE for early assessment, placement, and intervention of students with SEN; 4) Capacity development for SN&IE services; 5) Promotion of inclusive and child-friendly approaches (Ministry of Education-Rwanda, 2018, p.2). The child-friendly approach refers to 'designed approaches in learning and activities that are compatible and create fun for children during the process of the classroom learning' (Marzuki & Rahman, 2017).

The Rwandan education system approved the SN&IE policy in 2007, and it was amended in 2018 to meet the current and international sustainable development agenda. This policy was introduced to reflect national priority aimed at more accessible education for disadvantaged children and youths and to be

more relevant to the national needs (Karangwa et al., 2010; Republic of Rwanda, 2007; Republic of Rwanda., 2018).

The human and other resource potentials for Inclusive Education services are reportedly still scarce in Rwanda (Karangwa, 2014). The inclusive education policy shall promote the development of potential and capabilities within students with SEN. It will build the capacity system, first focusing on building human resources through the planned school of SN&IE services at the University of Rwanda (UR), developing resource provisions and support services through providing resources rooms and schools of Excellence in SN&IE, and reinforcing the existing structures within the Rwanda Education Board (REB) to provide support services and alternative curriculums (Ministry of Education-Rwanda, 2018, p.14).

Karangwa (2014) urges that the educational program that considers successful education for students with SEN should also typically be able to restructure the entire education system (education policy and practice) with a variety of inputs and processes within the environment of learning and teaching. Despite the innovative and *pro-vulnerable* policy initiatives, there are still challenges that arise in inclusive schools that need regular investigation (Bots, 2015; Karangwa, 2014; Karangwa et al., 2010; Talley & Brintnell, 2016; UNESCO, 2017).

1.4. The research problem

It may be clear from the above that there is a persistent quality assurance problem in relation to inclusive school education in Rwanda. Despite the various national policy initiatives and large amounts of resources invested in education annually (Bots, 2015; Madani, 2019; Republic of Rwanda., 2018; Talley & Brintnell, 2016), Rwandan teachers themselves express feeling limited in their teaching competence and they also express the need for more competence to teach in inclusive classrooms (Bots, 2015; Talley & Brintnell, 2016; UNESCO, 2017). The literature also reports concerns of inadequate assistance to support students with multiple educational needs (Leifler, 2020; McKay, 2016; Talley & Brintnell, 2016; Yadav et al., 2015; Zwane & Malale, 2018). Hence the quality of education in Rwanda, as in other developing countries, does not meet its potential or the national goals stated. As noted above, the government of Rwanda through MINEDUC announced that there is a need to enhance the quality of education and learning outcomes for all Rwandan children by assessing teachers' capabilities to evidence their skills and to establish their competencies (Madani, 2019; Ministry of Education-Rwanda, 2019). But no qualitative research has to date examined how teachers themselves assess their competence in contributing to inclusive schools in Rwanda.

This problem harms teachers because (i) It threatens educators' sense of efficacy and contributes to 'burnout' (McKay, 2016, p.5). (ii) It makes teachers afraid of teaching classes that include disabled children (Bentley-Williams et al., 2017). (iii) Teachers feel not confident and then become irresponsible in educating students with multiple special educational needs, etc. (Njelesani et al., 2018).

Hence my decision to empirically explore teachers' perspectives on competencies they have for teaching in inclusive classrooms, the support they say they need to develop their competencies and the challenges they say they might face in an inclusive school.

1.5. Purpose, relevance, and the benefit of the study

The study's purpose is to explore Rwandan teachers' perspectives on competencies they have for teaching in inclusive classrooms, the support they need to develop their competencies, and the challenges they face in inclusive schools in Rwanda.

An inclusive education system is one of the target areas for sustainability in the world (Assembly, 2015). This research is therefore also relevant to the Sustainable Development Goals 2030 and to the national plans of Rwanda about ensuring "inclusive education and equitable quality education and lifelong learning opportunities for all" by 2030 (UNESCO, 2013).

The study is expected to evidence teachers' present competencies and capacity for professional growth towards designing inclusive learning experiences for their students and daily challenges teachers may face while teaching inclusive classrooms. Evidence of this sort can help government authorities and school administrators to respond to support needs that teachers have, while improving the quality of education for people with disabilities is a strategy for them to overcome poverty (Duke et al., 2016), also one of the sustainable development goals.

1.6. The research questions

The study revolved around the following three main questions that all focus on the personal and professional perspectives of actual teachers in Rwanda:

1. What competencies do secondary teachers say they already have for teaching in inclusive classrooms in Rwanda?
2. What do secondary teachers say they need to further develop their competencies in Rwanda?
3. What challenges do secondary school teachers say they face when teaching in inclusive classrooms?

2. Literature review and theory

2.0. Introduction

This chapter maps useful competencies of teachers in an inclusive pedagogy setting and challenges for teaching in inclusive classrooms identified in previous research, as well as recommendations that were offered to improve inclusive education. It also sheds light on the meaning of the main concepts and the terms used. It goes further to Danielson's theoretical framework that guides this research. Danielson's perspectives are in line with arguments by Illeris (2009), Majoko (2019), and Voltz et al. (2001) on what a teacher should know and be able to do when working in inclusive schools.

2.1. Definition of key concepts and the term used

The terms by which these attributes/activities/ are defined are complex as noted, drawing on literature, in the following list:

i. Inclusive education

Many diverse definitions of inclusive education have been put forward in different parts of the world (Florian, 2014). Florian respectively quoted and cited some authors who gave different meanings of inclusive education, such as Uditsky (1993), Ainscow (1991), and Clark, Dyson, and Milward (1995).

The first author explained inclusion as valuing diversity or a bunch of standards that guarantee that disabled students are seen as required and valued individuals of the community. Second, inclusive education is taken as school improvement to shift away from differences between students towards changing school practices. Third, they defined it as extending the scope of ordinary schools to include a greater diversity of children (Florian, 2014, p.3).

Moreover, it is seen that this process of including children with disabilities together with no disabled students or vice-versa in school also involves transformations or some modifications of schools to make inclusive education possible (Florian, 2014).

Globally, inclusive education is a reform that involves transforming schools and other centers of learning to cater to all students, including students with learning difficulties and SEN (Ainscow et al., 2019; UNESCO, 2001). It is central to achieving high-quality education for all students and developing more inclusive societies because it promotes the social and educational advantages of accessibility to schooling, quality education, and educational resources (Armstrong et al., 2009; Haug, 2017).

Indeed, inclusive education is one education system that involves teaching all students (with and without disability) together in an ordinary school-class setting, where they all get instruction that corresponds to their capacity and interests without discrimination (Charema, 2010; Dreyer, 2017; Haug, 2017). Inclusive education in this present study is understood from this perspective.

According to Warnock (2008), inclusive education also means that children with special educational needs or disabilities have a right to special provisions and be included in the mainstream schools of their choice, provided that they did not divert other children from learning. It encompasses good teaching practices. While Florian (2014, p.5), as cited in Skae et al. (2020, p.2), explained that “inclusive pedagogy is a (procedure) an approach to teaching and learning that supports teachers to respond to individual differences between learners but avoids the marginalization that can occur when some students are treated differently.” Florian pinpointed out that the principle of inclusion involves the educators being prepared in order to meet students’ needs. Besides, some central conditions enhance the inclusiveness of schools, such as support for students, learner’s evaluation on an equal basis, effective school principal, and trained staff (Berhanu, 2011).

Göransson and Nilholm (2014, p.5) noted different understandings of inclusive education, such as (a) disabled students’ placement in mainstream classrooms. Voltz et al. (2001) and Mitchell & Sutherland (2020) assert that it is not only the placement of students with disabilities but also a condition of being or a sense of belonging for all students and acceptance. Besides, Göransson and Nilholm agree with Mitchell (2007) that inclusion concerns much more than the placement of pupils with disabilities in regular classrooms. Further, this inclusive school is characterized by nine factors such as vision, placement, adapted curriculum, adapted assessment, adapted teaching, acceptance, access, support; resources; leadership. (b) inclusion as meeting the social/academic needs of students with disabilities and of all students, and (c) inclusion as a creation of communities with specific characteristics; and all these points are needed to ensure inclusion in schools and society (Göransson & Nilholm, 2014, p.5). Importantly, inclusive schools contain both the students with and without disabilities, taught together in the same classrooms, and their educational needs are met at a high level. Furthermore, Florian (2014, p.6) pinpoints that teaching practices which include all children with and without disability make schools more inclusive and seems to be evidence that makes education to be more inclusive.

In contrast, the opponents of inclusive education point out that inclusive education reinforces the exclusion of some groups of people from economic and social opportunities (Armstrong et al., 2009). They further believe that inclusive education concerns only students with special educational needs (SEN), and not all youngsters are fit for being included in mainstream education (Croll & Moses, 2000; Hodkinson, 2005). Those who claim a commitment to inclusive education always contribute to enhancing problems and struggles for an inclusive society and schools (Armstrong et al., 2009).

In the Rwandan socio-cultural context, inclusive education is known as a ‘non-exclusionary education’ (Karangwa, 2014; Karangwa et al., 2010).

ii. Competence

The ordinary classroom can provide optimal quality education for children with disabilities. However, the classroom teacher should have skills, knowledge, and ability to teach students with disabilities included in mainstream schools. Throughout the last 15-20years, the concept of competence had considered as a requisite, or a keyword in the education field, management, working life, politics, as well as a modern expression for what a person should know and able to do or achieve (Danielson, 2007; Illeris, 2009, p.83). It is also an essential concept when considering inclusive education and its successful implementation (Cate et al., 2018).

Other authors give different meanings of competence according to the context the term is used. For example, Rychen & Salganik (2003), as cited in Illeris (2009, p.56), explained this concept as the aptitude to successfully meet complex demands in a context through the mobilization of psychosocial prerequisites. Besides, Illeris (2009, p.59) argues that competence is “a specifically trained part of human experience” gained by learning or doing, which grows or sometimes perishes in us. He further affirms that it can be expressed as purchasable wares. Today, competence as a concept captures something crucial about education and learning because it narrates how a person, teacher, enterprise, and a nation can cope with constantly changing global society (Illeris, 2009; Sandberg, 2009).

In a broader sense, competence refers to a person being qualified in a domain, and not only mastering a professional area (having skills, knowledge) but also to be able to apply the professional knowledge and to deal with future and unpredictable or unforeseen situations properly (Illeris, 2009). Further, Illeris (2009, p.85) argues that “competence is not something that can be produced, like commodities but must be developed by the person” this means that with the willingness of people, they can be able to develop their competencies successfully. But they cannot buy or sell them like products- it is *developmental, impermanent, and context-dependent* (Epstein & Hundert, 2002).

Due to the orientation towards the development of the world, the Sustainable Development Goals (SDGs) 2030, and Rwanda transformation goals, the concept of competence is so much more in line with modern demands for what a person can do or achieve than to be just qualified. Therefore, for this study, it is defined as the ability, knowledge, skills teachers must have to teach efficiently and accurately in inclusive classrooms and the other potentials to problem-solving or to deal with new challenges when they appear in an inclusive setting (Cate et al., 2018; Illeris, 2009).

iii. Disability

Disability is recognized as a “concept that results from the interaction between persons with impairments and attitudinal and (external) environmental barriers that hinder their full and effective participation in society on an equal basis with others,” a quote from Armstrong et al. (2009, p.20) and CRPD (2006, p.24). It can also refer to the partial or complete loss of the use of a specific body part or organism. This reduces or lost the function of the body part or organ.

v. Mainstream schools

Mainstream schools refer to ‘Ordinary’ or ‘Regular’ schools that educate students that present no Special Educational Needs (SEN) and do not require any exceptional educational adjustments (Republic of Rwanda., 2018). Similarly, ‘mainstreaming’ typically refers to the process of moving pupils from special schools into mainstream schools, where they are, it is then often assumed, ‘included.’

vi. Special Educational Needs (SEN)

“These are non-ordinary needs a student may have in schooling as a result of intrinsic or extrinsic limitations/ barriers.” The students with these special needs benefit from additional educational services such as different approaches to teaching, need extra attention, immediate feedback, a specifically adapted teaching area, classroom supports (Poon-McBrayer & Lian, 2002; Mitchell, 2004; Republic of Rwanda, 2018). Children with these needs include those who have mental retardation, learning

disability, behavior disorders, hearing impairment, physical disabilities, gifted and creative abilities, and a combination of multiple disabilities (Poon-McBrayer & Lian, 2002). Special educational needs are expected to zero in on an individual youngster's instructive necessities in terms of the required arrangement, in this manner dodging over-simplifying and defaming shortage classifications (Norwich, 2014).

vii. Inclusive settings

Inclusive settings encourage students with SEN and those without disability to study together and offers the opportunity to learn from each other (Bualar, 2018).

viii. Special Needs Education

These are special educational arrangements that are in place for people with disabilities (Mittler et al., 1993). It is also a special and separated education that provides opportunities for children with exceptionality to achieve their full potentials (Poon-McBrayer & Lian, 2002). It is synonymous to special education.

2.2. Developments in education access in Rwanda

Rwanda is a small, mountainous, and landlocked nation, popularly known as the '*land of a thousand hills*' (Brandon, 2013). Rwanda has over 12.6 million inhabitants living on 26,338 square kilometers of land. It is bordered by Uganda in the north while Burundi is in the south. To the East of Rwanda lies Tanzania, and to the West, there is the Democratic Republic of Congo (Lewis, 2009; United Nations, 2019). Current Kigali (the capital city of Rwanda) is one of Africa's cleanest and safest cities (World Education Services, 2019).

'The Rwandan state faced major challenges immediately following the genocide 1994-such as destroyed physical infrastructure, massively displaced population that was psychologically traumatized, and ruptured social fabric, poverty' (Burnet, 2005, p.237) and destroyed the educational system.

Throughout the history of formal education, access to education has been an issue due to the remoteness of most parts of Rwanda (Brandon, 2013). However, many strategies have been undertaken by the new Rwanda government to promote education, unity, and reconciliation. For instance, a new national identity card was introduced that did not mention ethnicity, promotion of equal access to school education by all students irrespective of the social-economic background, and expand infrastructure (Brandon, 2013; Burnet, 2005; Mafeza, 2013; Williams, 2016). Rwanda's government plans hinge on people, their well-being, their development, lift the nation out of poverty, promoting the stability of the country, peace; and in the way that attends to precipitating factors that were thought to have led to struggle and conflict -specifically ethnic divisionism, resource scarcity, and few opportunities for social mobility and few freedoms (Williams, 2016,p.4). Besides, Hayman (2005) as noted in Brandon (2013), argues that the education sector has recovered physically –e.g., '*a fee-free basic education policy, primary and secondary school enrolment in Rwanda has surged*'. Despite the new difficulties that may appear over time, Rwanda's society is continuously reconstructed at all levels, such as economy,

business, education, partnerships with other countries, and the government is viewed as being comprehensive and inclusive of all Rwandans.

Lately, the public authority of Rwanda has been acknowledged for extending training for every youngster (Williams, 2016). Today, all Rwandan children with and without a disability have great access to school education, but the students' outcomes and quality education are still low (Ministry of Education-Rwanda, 2019; Williams, 2016). Most resources have been used for expanding and extending education access for all children through classroom construction and some materials provisions. However, investments in the training of inclusive teachers in order to meet all students' needs have not been emphasized (Williams, 2016). The lack or inadequate of teacher preparedness for special education needs in Rwanda illustrates the amounts of difficulties faced by teachers in teaching inclusive classes (Bots, 2015; Talley & Brintnell, 2016; UNESCO, 2017). Authors elucidate who should dominate in an inclusive setting, what skills are needed to work in inclusive education to ensure equitable quality education in inclusive schools (Danielson, 2007; Haug, 2017; Illeris, 2009; Majoko, 2019). D'Anna (2016) asserts that to ensure teachers' effectiveness and quality education, leaders should turn to more effective teacher evaluations or assessments of their skills. Moreover, efficient assessment of teachers' competencies reassures and provides to education stakeholders and parents safety that their children are receiving quality education within the education system.

2.3. Teacher's work in Rwanda

The mission of education in Rwanda is to provide all with inclusive quality education, enabling its people to solve problems in order to achieve sustainable development, focusing on battling ignorance, the advancement of science and innovation, basic reasoning, and positive qualities (Ministry of Education-Rwanda, 2019; Official Gazette, 2021). This mission can not be accomplished without the high contribution of teachers. All teachers in Rwanda have the following responsibilities: promoting learning and teaching, school management, participating in the preparation and use of the school's budget, contributing to the monitoring of the behavior and discipline of teachers and learners, and other problems identified by the school. Further, they should promote the use of technology, languages taught in school, prevent and fight against all forms of violence, the ideology of genocide, teach students the Rwanda values, and strive for excellence and innovation as stated in article 46 (Official Gazette, 2021).

Teachers in Rwanda have different beliefs about teaching, and they think it can be both vocational (a sense of calling) and professional (Brandon, 2013). This is explained in Brandon (2013) that a sense of calling to be a teacher can be related to vocation, and he asserts that "teachers have an innate ability to teach and that teachers are called" p.68. He further illustrates this in the example given by one of his participants that some teachers do the job of teaching not just for seeking money but rather the impact they have on the students' development. The ones that believe teaching is a profession, emphasize that there is a period of pre-service education that must be completed to have permission to enter the teaching profession (Ibid, p.70). The idea was supplemented by Mitika and Gates (2011), as cited in Brandon (2013), that 'a profession requires qualifications to gain entry and a long-term commitment to the job'.

The government provides professional development and has planned to strengthen the continuous professional development of teachers (Ministry of Education-Rwanda, 2019). It was generally provided in the school holidays, and one teacher could attend and then share knowledge with other teachers in their school (Brandon, 2013). Rwandan teachers acknowledge the importance of professional

development because it affords them the opportunities to go further and do a good job. Based on Brandon's study about Rwandan teachers' enacted beliefs, Rwandan professional teachers are very important in both schools and the community. They are mostly guiders and participate fully in developing the community where they live. The government trusts educators to be 'the people that can help administer the census.' Teachers are mostly voted to be leaders in the community and help a lot during government elections. So, the value of educators is seen by the community.

In Rwanda, teachers who have a bachelor degree (A0) teach secondary school and at a high education level, almost all teachers hold Master's and above degrees, with a priority of higher skills associated with research; those with only a diploma (A2) teach in pre-primary and primary education level (Brandon, 2013; Ministry of Education-Rwanda, 2019). The salaries of Rwandan teachers are different depending on their qualifications and the education level they teach. But when a primary teacher holds a bachelor's degree, for example, can not be paid at that qualification level because he/she teach at the primary educational level (Brandon, 2013). Rwandan teachers have a low salary, in general, compare to other servants hence the "low salary dissuade many from teaching and lowering the status of teaching" and forces many teachers to find second jobs like private tutoring, and subsistence farming (Brandon, 2013,p.71). He further points out how these effects from low salary hurt teaching, learning, and quality education: some teachers are sometimes not at school in the working hours, without informing the headteacher because they are working on their project that may bring additional money.

To minimize the effects of low salary and to attract and hold high-quality or great teachers in the profession of teaching, a decision has been taken to increase teachers' salaries by 10% once every three years and donation of a cow and some opportunities for career progression for the best performing teachers (Ministry of Education-Rwanda, 2019, p.34). Currently, it is also planned to enhance the number of higher education staff who have PhDs by promoting access to Ph.D. programs and providing study leave and financial incentives to support the best academic performers to pursue the Ph.D. program (Ministry of Education-Rwanda, 2019).

2.4. Useful competencies of teachers in inclusive schools

The different understandings of the challenges associated with the implementation of inclusive education and students with diverse special educational needs demonstrate who should dominate teaching in an inclusive classroom (Haug, 2017). Studies particularly indicate that educators are the absolute most significant factor affecting how much students advantage from the school, and further, they assert that the support from educators is an essential strategy to accommodate students with special needs in regular classrooms (Akalin et al., 2014; Haug, 2017; Leifler, 2020; Zwane & Malale, 2018). Furthermore, Cate et al. (2018) affirm that the successful implementation of inclusive practice largely depends on teachers. These are the reason why teachers should equip with a high level of multiple competencies since they are the *Heart of Education*. They are at the heart of a good quality of life, intellectual growth for disabled students and those without disability regardless of where their education took place (Mitchell, 2007). All necessary competencies are shown in the following theory.

2.4.1. Theoretical Framework

The studies and Danielson's Framework for teaching describe the competencies of teachers to make inclusive education work. For that, teachers should be able to develop different competencies because

higher levels of the skills and knowledge enable an educator to be successful in the implementation of inclusive pedagogy and effective in providing high-quality education or instruction (Cate et al., 2018; Danielson, 2007; Madani, 2019; Majoko, 2019). Authors suggest domains summarising teachers' competencies to which teachers should be able to pay much attention: 'the instructional strategies employed, the physical classroom environment, class management techniques used, and the educational collaboration' (Illeris, 2009; Majoko, 2019; Voltz et al., 2001). These perspectives are strictly linked to the four domains that constitute Danielson's framework. See figure 2.

This thesis research is built on Danielson's theoretical framework. It is a useful tool in defining 'good teaching' and it offers a structure for teachers to assess their practice and organize improvement efforts (Danielson, 2007, p.10). It is rooted in respect traditions in cognitive psychology, especially the writings of Dewey, Vygotsky, and Piaget (Ibid,2007). Always, educators seek to improve their skills, ability in their professional work of teaching in inclusive schools (Danielson, 2007). And this framework for teaching recommended by Danielson indicates 'what teachers should know and be able to do' in their teaching profession in inclusive schools. It has been used in other research, like in the study examining the perception of stakeholders on Universal basic education regarding inclusive education (Bila, 2015).

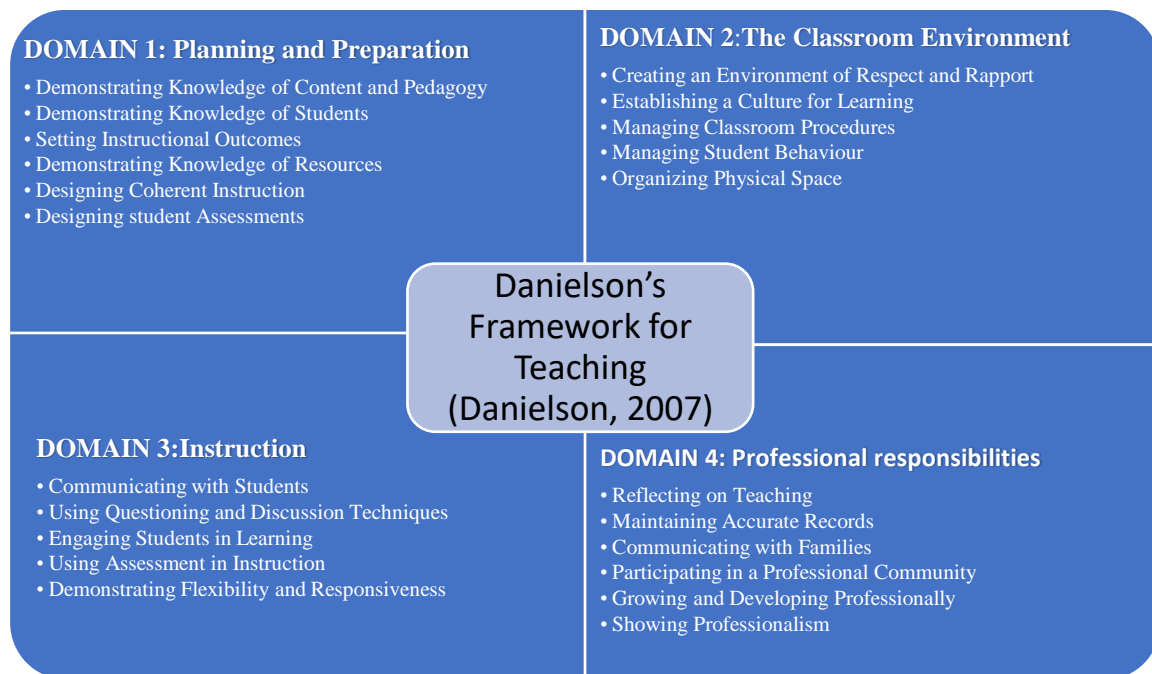


Figure 2: Danielson's Framework for teaching (illustrating teachers' competencies)
Source: (Danielson, 2007, p.3-4)

2.4.1.a. Instructional strategies -planning and preparation

A study conducted by Voltz et al. (2001) about what matters most in inclusive education shows that the biggest challenge of inclusive education is appropriate accommodating the instructional needs of diverse students so that all students with special educational needs participate actively in inclusive classrooms. However, Weiss et al. (2019) point out that the adaptation of instruction to student's needs depends on the teachers themselves, their competencies, and their participation in joint professional activities. In

general, adapting instruction serves all students Weiss et al. (2019). Planning and preparing the lesson take into account differentiated instructional strategies by offering different learning activities and organizing instructions around the main idea (Voltz et al., 2001; Weiss et al., 2019).

Danielson (2007) recommends that the knowledge of the content, the course (discipline) structure, knowledge of students, for example, their skills and language proficiency, their learning process, and their special needs is very important for both instructors and children. Moreover, she argues that setting instructional goals or outcomes, formative assessment, and knowledge of instructional materials and classroom resources to extend content during preparation and planning lessons is essential for teachers. Keeping all students with and without disability engaged, motivated, excited for learning activities involves the illustration of flexibility (lesson adjustment), providing feedback, good communication with students, explaining given activities and assignments, and affording emotional supports like rewarding, congratulating the best performers (Danielson, 2007).

Voltz et al. (2001, p.25) quoted some questions a teacher needs to ask himself or herself when planning, preparing lessons, and before beginning teaching, such as *what is most critical for all students to learn from this unit? Why is this information important? What should all students be able to take away from this lesson?* These questions help educators to decide what content is most significant to highlight and with which areas it is most *critical* to intervene or revise (Danielson, 2007; Voltz et al., 2001).

Besides, teachers in inclusive classrooms should keep the belief that they are capable of teaching all students (Florian, 2014); and feel comfortable applying a wide range of instructional strategies and learning activities to enhance learning for all students (Majoko, 2019; Voltz et al., 2001). Since there is a diversity of students with different capacities involved in inclusive classrooms, one methodology can not fit all. For instance, Lawrence-Brown (2004), Haug (2017), and Voltz et al. (2001) identify some instructional strategies educators may use, such as i) teacher-directed instruction by using class discussion and questioning. ii) guided practice and good all-around teaching. iii) collaborative learning activities to provide students with opportunities to apply new knowledge and skills. vi) providing minilessons where needed, and these brief lessons help teachers to revisit the concepts in the course. V) “Cross-age and same-age peer tutoring formats.” vi) differentiated instructional strategy -it means “that teachers will create different levels of expectations for task completions within lesson or units” quote from (Lawrence-Brown, 2004). Moreover, child-friendly and learner-centered approaches can also be used for effective teaching and learning within inclusive settings (UNESCO, 2017).

2.4.1.b Classroom environment - classroom climate

According to Danielson (2007), the physical environment supports the educational objectives. Creating a facilitating and respectful physical environment is vital to the classroom climate and allows a good interaction between educators and students. Teachers need to develop respect for individual differences that let all students and those with SEN feel safe, accepted in the regular school environment (Cate et al., 2018; Voltz et al., 2001). Sitting plans or physical placement of students with SEN and disabilities in the classroom is crucial. Voltz et al. (2001, p.5) suggest an example of how teachers should manage this student’s placement-

highly distractible students should not be seated in high-traffic areas, by windows, or doors. Students with sensory impairments should be positioned for optimal viewing of the

board or close to the teacher/speaker. If students who use wheelchairs are present appropriate tablespace should be provided, and adequate aisle space should be maintained to facilitate the student's movement throughout the classroom.

In the classroom environment, teachers need to make sure that classroom boundaries are clear and specific for all students to prevent inappropriate behavior (Danielson, 2007; Voltz et al., 2001). For example, students with disabilities who enter mainstream education from special education frequently have been presented to organized conditions, and structured environments and assumptions or expectations are unequivocally clear (Voltz et al., 2001). Sometimes, it is necessary to modify or adapt assignments based on the students' level of performance to avoid inappropriate behavior that may result from frustration (Danielson, 2007; Voltz et al., 2001).

Management of materials and supplies, instructional groups, and creating an exciting atmosphere about the expectations for learning and the significance of the content are also necessary for a classroom environment (Danielson, 2007). Furthermore, the teachers must keep all students actively engaged in learning activities that are interesting, challenging, age-appropriate, and consider them as real people with interests, concerns, and intellectual potential (Danielson, 2007; Voltz et al., 2001). "Praise students for their consistent efforts and their accomplishments." Invite them to share their learning journey about the subject in the class. Moreover, educators have to know the students by spending a few minutes a day asking about their interests, dislikes (teacher interaction with students). Educators should find a way to let students know that educators are interested in their academic and social performance. It appears when students recall their teachers years later, it is often for the teacher's skills, care, motivation, and sacrifice; they count on the teachers to be fair (Danielson, 2007).

Being aware of environmental and instructional distractions such as noise, reading aloud, reciting that may disrupt students' ability to work independently is also vital. Teachers may make changes based on their observations. Counsel the special education educator for special procedures and special teaching techniques to improve students' performance (Danielson, 2007; Voltz et al., 2001). So, educators are supposed to recognize how students learn to eradicate obstacles and create flexible learning environments.

2.4.1.c. Educational collaboration (professional responsibility)

Professional responsibility is associated with being a genuine professional educator (Danielson, 2007). The educational collaboration team contains general and special education teachers, therapists, paraprofessionals, and parents (Lawrence-Brown, 2004, p.57).

The educational collaboration team is crucial for the success of inclusive education because it finds ways for all students with SEN to actively participate in lessons that may be too difficult for them (Lawrence-Brown, 2004; Voltz et al., 2001). Educational collaboration varies in different forms, such as *pull-in supports and problem-solving*. Pull-in supports refer to the opposite of taking those students with disabilities out of general education classrooms. It involves the actions of bringing support services to students with disabilities. For example, co-teaching, being good advocacy, monitor students' progress in learning by maintaining accurate records (Voltz et al., 2001). Teachers need to be sure that all students have the educational supports for learning. And educators should have the capacity to solve the problems that may occur in an inclusive setting.

Educational collaboration facilitates teacher's professional development by allowing teacher field trips to the other successful inclusive schools. And through communication with parents and their colleagues, participating in a professional community (e.g., relationships with their colleagues, participation in school and district projects), showing professionalism (e.g., integrity and ethical conduct, decision making, compliance with school and district regulations), and receptivity to the feedback from colleagues (Danielson, 2007).

2.5. Challenges for teaching in inclusive classrooms

Several challenges to the implementation of inclusive education in classrooms have been identified in the previous studies. They are summarised into four sub-themes, such as challenges related to classroom climate, school-related challenges, self-related challenges, management-related challenges.

2.5.1. Challenges related to classroom climate

McKay (2016) conducted a study in Brisbane, Australia, with a sample of 14 beginning teachers and aimed to demonstrate the ongoing problems beginning teachers face when teaching students with diverse learning needs. She found that teachers in inclusive schools leave the profession early because of the workload made difficult by the diverse range of students. She contends that the difficulties inside inclusive settings threaten educators' sense of efficacy and contribute to teacher *burnout*. Despite the efforts, they feel a lack of genuine achievement at work (Talmor et al., 2005).

Moreover, the Canadian Hearing Society outlines some of the 'conundrums' for inclusion when considering language access for signing students. For instance, the Canadian Hearing Society (2013, p.5) asserts that 'students who use spoken language experience in an inclusive educational environment where they access the curriculum, what their teachers are saying and what their peers are saying, through a language they all share.' In this inclusive classroom environment, deaf students may face widely accepted practical discrimination based on *audism*. And due to '*the lack of language proficiency of teachers, access to education is, in essence, being withheld from signing students.*' They agree that inclusion gives a sense of belonging. However, struggles at inclusion often result in exclusion and isolation, especially for deaf students.

Furthermore, researchers conducted the studies in Turkey, Thailand, and Southeast Alabama. They found that teachers have difficulties in maintaining the discipline of all students in inclusive classrooms because the behaviors of students with disabilities are potentially very disruptive, and to give equal attention to all students is somehow challenging (Akalin et al., 2014; Busby et al., 2012; Klibthong & Agbenyega, 2020). Besides, Akalin et al. (2014, p.1) argue that educators in Turkey generally do not want students with SEN in their classes because of their lack of knowledge and skills regarding inclusive practices. Further, they lack the skills to manage the students with inadequate self-care skills.

Many teachers in Scotland believe that they are not responsible for some students (Florian, 2014). They lack the skills to manipulate special devices and equipment used by students with special educational needs, difficulties to solve the problem posed by exceptional students (Khoaeane, 2012). Some teachers are not familiar with teaching strategies that can enhance the learning of students with a disability. These teachers usually have difficulties in an inclusive pedagogy (Busby et al., 2012; Klibthong & Agbenyega, 2020; Yadav et al., 2015). Teachers claim a high number of students in classrooms and students with

disabilities are not accepted by students without disabilities especially, in Gurgaon in India (Talmor et al., 2005; Yadav et al., 2015).

2.5.2. School-related challenges

Studies demonstrated that schools do not have adequate resources for ensuring the successful implementation of inclusive education. Insufficient paraprofessionals available to support the student with SEN and assist teachers in teaching these students with SEN; and limited support from school administrators (Akalin et al., 2014; Klibthong & Agbenyega, 2020; Yadav et al., 2015). Inappropriate infrastructures and instructional accommodation systems to accommodate students with different disabilities (buildings are not barrier-free) (Khoaeane, 2012). Lack of specialized education teaching staff or strong educational collaboration team to support inclusion; and *lack of assistance to support diverse students* (Bila, 2015; McKay, 2016; Yadav et al., 2015; Zwane & Malale, 2018).

The investigation of barriers to inclusive education implementation at high schools in the Gege branch, Swaziland, by Zwane & Malale (2018) shows the lack of facilities in the governments' inclusive schools; teachers' incompetence; lack of resources, and appropriate infrastructure for disabled students. The studies revealed that in Spain as in Northern Ireland, teachers receive inadequate training in inclusive education; teachers not trained in identifying students with challenges; unqualified and underqualified teachers, and inappropriate teaching methods since teacher attention is only on the special students (Lambe & Bones, 2006; Moríña, 2017). And further in-service teachers received inadequate staff development and training ahead of the implementation of inclusive education (Khoaeane, 2012; Zwane & Malale, 2018). Most of their teachers were not developed professionally for inclusive education, and the availability of technology in their schools is limited (Khoaeane, 2012; Zwane & Malale, 2018). These challenges explain the arguments of Bentley-Williams et al. (2017) and Horzum & Izci (2018) that teachers who received inadequate education or training about inclusive education are not confident and are afraid to teach students with diverse special needs.

2.5.3. Self-related challenges (personal challenges)

The literature shows that teachers fail to identify children categorized as having special educational needs and disabilities (Leifler, 2020; Miller, 2019; Moríña, 2017). Communication and collaboration between teachers themselves, professionals, and parents of students with disabilities is a problem and time-consuming; lack of motivation and self-efficacy in teachers (Busby et al., 2012). Some educators are also incompetent to use a multi-sensory approach for students with different disabilities, inadequate skills about inclusive practice, and the lack of experience, skills, the knowledge required to teach students with Special Educational Needs (Akalin et al., 2014; Yadav et al., 2015; Zwane & Malale, 2018). For example, teachers of deaf students in inclusive schools are not conversant in sign language and they don't know to sign many abstract words and concepts (Musengi & Chireshe, 2012). Further, when deaf students feel isolated cognitively or socially in inclusive schools, their education may ultimately suffer (Nunes et al., 2001).

Moreover, teachers of students in inclusive schools express a limited or lack of competencies to teach in inclusive classrooms and need for more competencies to teach children with special needs (Bots, 2015; Klibthong & Agbenyega, 2020; Lambe, 2011; Leifler, 2020; McKay, 2016; Yadav et al., 2015; Zwane & Malale, 2018). Consequently, teachers remain fearful and irresponsible (less willing) in

educating students with multiple special educational needs (Bentley-Williams et al., 2017; Lambe & Bones, 2006; McKay, 2016; Njelesani et al., 2018).

2.5.4. Management/law-related challenges

According to Abubakar (2019), Yadav et al. (2015), and Zwane & Malale (2018), management of the inclusive school is very challenging since the parents of children without disabilities do not appreciate or are not convinced with the idea of placing their children in the same school with disabled children. Inadequate administrative support to the implementation of the inclusive education program and the curriculum is not modified to benefit children with special needs (non-inclusive curriculum). Besides, the difficulties in including students with severe physical disabilities in co-curricular activities impact and authors report that teachers receive very little information on the students with special needs included in their schools and lack of disability support staff (Moriña, 2017; Talmor et al., 2005).

2.6. Recommendations thought to solve challenges

According to Bila (2015) and Lambe & Bones (2006) studies, the success of inclusive education will be attained if the schools have adequate resources, appropriate infrastructures, the supply of special education teachers into the system, and proper use of funds for inclusive education. Further, the authors suggest that it is crucial to prepare adequate ongoing support for new teachers and general teachers working in classrooms with diverse students or learning difficulties to improve their work (McKay, 2016).

Appropriate training for teachers should allow them to meet and interact with parents, therapists, and family members of students with disabilities. Communities and schools need to plan buildings, accommodation, roads, and sporting facilities supporting people, students with disabilities, and special needs (Busby et al., 2012; Charema, 2010; McKay, 2016). Besides, Hayes & Bulat (2017) point out that 'students with disabilities should receive reasonable accommodations within the (the school) classroom.' Furthermore, deaf students should have access to deaf teachers, appropriate sign languages, adapted curriculum that includes the study of sign language (Canadian Hearing Society, 2013; United Nations, 2018; WFD Board, 2018).

In exploring the development of attitudes towards educational inclusion among prospective primary school teachers in Scotland, Sosu et al. (2010:402) highlight the need for pedagogical scaffolding to facilitate the successful implementation of inclusive pedagogy. Zwane and Malale (2018) recommend establishing a vibrant in-service and preservice teacher training program by the Ministry of Education. These are in line with Sosu et al. (2010) arguments that providing preservice teachers opportunities is essential to develop skills, confidence, and effective inclusive education. For instance, in Armenia, deaf students or those with a hard of hearing are included in regular schools; the government provides them amplification for free of charge (Miller, 2019), this helps not only students but also teachers who teach them.

Moreover, providing more information, seminars, and workshops on teacher' practices, on working with children categorized as having SEN and in the field of special needs education can improve teachers' understandings and their capability to work in inclusive settings (Akalın et al., 2014; Busby et al., 2012; Khoaeane, 2012; Miller, 2019). In other words, teachers need to be well trained (Khoaeane, 2012;

Moriña, 2017). Since parents play a vital role in their children's education, Karangwa (2014) and Busby et al. (2012) also argue that partnerships between teachers and parents can contribute to sustaining and protecting inclusive education.

The quality of education in Rwanda, as in other developing countries, does not meet its potential or the national goals stated (Madani, 2019; Ministry of Education-Rwanda, 2019). The government of Rwanda has announced that there is a need to enhance the quality of education and learning outcomes for all Rwandan children by assessing teachers' capabilities to evidence their skills and to establish their competencies (Ministry of Education-Rwanda, 2019). However, no research has to date examined in any rich detail how teachers themselves assess their competence in contributing to inclusive schools in Rwanda. Most research studies described above used quantitative or sometimes mixed methods that ignore individual experience, perceptions, and reflections on the ground. Some studies have used systematic observation, surveys, and questionnaires as a method. The present qualitative study complements that evidence-base by mapping individual teachers' perceptions of their own skills and capabilities and the support they feel they need to strengthen their competencies and face daily challenges in schoolwork.

3. Research Methodology

3.1. Introduction

This chapter addresses the methods and procedures used in designing and conducting the present study to achieve the study objectives. It focuses specifically on techniques used in sampling, data collection, and analysis of the data. Ethical considerations relevant to this study will be discussed in some detail. According to Creswell (2018, p.42) and Creswell (2008), the research approach refers to ‘the plans and procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis and interpretation.’ It involves the intersection of philosophical beliefs, designs, and specific methods. While research design refers to the types of inquiry within qualitative, quantitative, and mixed methods approaches. Besides, research methods refer to the ways to obtain and organize knowledge or just the forms of data collections and analysis (Creswell, 2018; Magnusson & Marecek, 2015).

3.2. Research philosophical worldview

This study underpins in constructivism paradigm. Constructivism relies on understanding the multiple meanings of the participants (the ways they do things) (Creswell, 2018). Indeed, constructivist researchers regularly address the processes of interaction among people or individuals.

The constructivist approach assumes that educators *understand that they are adults and that they, together with their colleagues and in line with state standards, determine what it is that students will learn* (Danielson, 2007, p15). For this reason, it enables students to grasp the essential and main concepts, the main ideas and develop crucial cognitive skills. Besides, a teacher who wants to teach a lesson in a constructivist way should engage students in building up their own understanding (Danielson, 2007)—for instance, providing opportunities for students to co-construct knowledge (active participation), using formative assessment to support learning (Florian, 2014). Although teachers control or guide the process of what students learn, students *do much of their intellectual work themselves* (Danielson, 2007). That is the reality for all human beings, adults, and children who believe in constructivism philosophy in education.

This study also acknowledged that the interpretation (i.e., try to understand and make sense or to draw the meaning of what is said or researched) is the heart of all types of interpretative (qualitative) research and central activity of the researcher (Creswell, 2018; Magnusson & Marecek, 2015). Besides, ‘people form meanings and modify them during the course of interactions within social settings’ (Magnusson & Marecek, 2015:2). Crabtree and Miller (as cited in Baxter and Jack, 2008) point out that good cooperation or collaboration between investigator and participants is also one of the benefits of this constructivist approach while allowing the participants to share their opinions (Baxter & Jack, 2008:2). Therefore, they describe their views of reality about what they do and know and where they work. This action facilitates the researcher for a better understanding of their perspectives.

3.3. Research approach, Design, and sampling techniques

A qualitative interview-based approach was used to better understand a group of teachers working in inclusive schools. According to Brantlinger et al. (2005:196) and Obiakor et al. (2010), qualitative research is “a systematic, [organized, particular] approach to understanding qualities, or the essential nature, of a phenomenon within a particular context.” Further, Creswell (2014, p.4) and Creswell (2018, p.43) point out that “qualitative research is also an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem.” In other words, it is best at exploring things in-depth, learning about study participants’ perspectives and what matters to them (Arksey & Knight, 1999, p.34). Moreover, the qualitative research process includes arising questions and techniques, information ordinarily gathered from research participants. Information examination inductively working from specific to general subjects, and the investigator interprets the meaning of data or gives the significance of the collected information (Creswell, 2018). Qualitative researchers are interested in how people make logical sense of their activities, experiences, interactions, and relationships and how they plan and act accordingly (Magnusson & Marecek, 2015). They almost see people as always situated in social contexts and constantly engaged in understanding them (Magnusson & Marecek, 2015, p.175).

This approach is crucial in knowledge production about particular settings, people’s everyday practices, and individual perspectives (Brantlinger et al., 2005; Creswell, 2018; Magnusson & Marecek, 2015). For instance, Magnusson and Marecek (2015) pinpointed the contribution of this approach to knowledge production about how people experience important events in their lives and interact within social settings such as in classrooms and schools. Such knowledge acquisition has been challenging to acquire through other approaches. Indeed, qualitative research can contribute to useful and practical knowledge about what people talk and accomplish in everyday interactions. In conducting this study, the qualitative approach was a better fit to explore teachers’ perspectives. It gives a clear picture of present teachers’ capabilities, daily challenges in teaching in an inclusive classroom, and needed support to develop their competencies. Qualitative data from this study led to an understanding of educators who work in an inclusive school. By focusing on the research participants, this research gives a ‘voice’ to the teachers to express their opinions freely.

The study follows an interview design that was arrived at after careful consideration of numerous plans and making multiple qualitative judgments to find the best fit for the study objectives. Magnusson and Marecek (2015) affirm that interview design is the best fit for qualitative research, which involves understanding people’s own opinions about something through their talk. They further assert that the best way to do such a study with this type of design is to listen to research participants talk about their ways of doing things (: 2). The design focuses on understanding and studying the words of (people) participants (Arksey & Knight, 1999). Further, it relies on interviews (Magnusson & Marecek, 2015:178). Analysis of these oral data involves plenty of *thoughts, discussion, and time*. Indeed, Magnusson and Marecek (2015) declare that doing interview-based qualitative research provides the readers the knowledge and skills necessary to go aboard on their own projects in the different disciplines such as education, psychology, sociology, counselling, nursing, and public health. Then this is important not only for the researchers on what they can learn about the people but also the readers gain the different useful knowledge.

The interview is an immensely more important research method to the social sciences projects; and provides in-depth data about experiences and viewpoints of participants on a particular topic (Arksey & Knight, 1999; Turner, 2010), and interviewing is also a family of research approaches. As, Arksey and Knight (1999, p.2) suggest that interviewing is “a family of research approaches that have only one thing in common - a conversation between people in which one person has the role of a researcher.” They further argue that choosing a suitable interview approach is a skilled activity, which requires taking a position ‘on some complex and important debates on the nature of research in the Social Sciences’ (Arksey and Knight,1999). Despite a range of interviewing approaches, however, the interview is increasingly and commonly used as the research design (Arksey and Knight,1999).

So, what are the responsibilities of the interviewer in the interview-based research? He /she is responsible for steering and maintaining the conversation; for instance, if a participant’ s stories and associations stray from topics that are outside the scope of the interview guide, the interviewer should narrow the conversation back to the content of the interview guide (Magnusson & Marecek, 2015). Further, the interviewer needs to be an active listener (to be prepared to help participants explore the topic); and give a clear presentation of the study at the initial contact of the participant and the start of the interview (Ibid.,2015:63). In case reluctant participants appear, the interviewer needs to encourage them and sometimes return to the purpose of the study; and remind them of ethical considerations of the study since reluctance is driven mostly by a fear of how information can be kept confidential, etc. (Magnusson & Marecek, 2015).

According to Magnusson and Marecek (2015, p.6), “interview is face to face conversations structured by the researcher and that provides an effective way to gather material or (information) that speaks to researcher’ interests and goals.” They affirm that it so since when people agree to participate in qualitative interview-based research, the researcher asks the study participants to explain themselves. Then the participants are supposed to tell the researchers about what they know or do plainly. It is more useful indeed to bring forwards the research participants’ perspectives, stories, memories, worldviews, feelings, beliefs (Arksey & Knight, 1999; Magnusson & Marecek, 2015). It is also useful in exploring wide cultural consensus areas and *people’s more personal, private, and special understandings*. Many authors, as noted in Magnusson & Marecek (2015:6), point out that speaking takes more than expressing and shaping personal experiences. Talk is also used to act -to do things because people don’t just speak to tell experiences, opinions, and perceptions in conversations with others, but also, they use talking to justify actions. Interviewing teachers was, therefore, a good way for this study since they explained their own actions and told about their thoughts and reflections. Besides, it provided rich information about how they work with all students in inclusive settings, their challenges, and what they have done or how they try to make inclusive education work.

Qualitative interview-based research, like other scientific research is guided by theory to ensure truthfulness or to upgrade its quality and credibility; since the theoretical framework gives the researcher a set of concepts and ideas to consider about the subject that is being studied (Arksey & Knight, 1999). Furthermore, good interviewing research uses systematic methods of selecting participants for a study, systematic methods for data collection, and transparent procedures for analyzing data gathered. In this kind of study, a researcher thinks about ethical considerations for conducting a study and a good way for reporting study findings (Arksey & Knight, 1999). Hence, to achieve the objective of this study, different appropriate procedures have been taken into consideration.

Researchers acknowledge that the purposive sample choice is fundamental to the quality of data collected (Creswell, 2018; Tong et al., 2007). A purposive sampling technique is a non-probability sampling technique in which specific individuals selected satisfy some pre-determined purpose, parameter, or criteria such as their experience and knowledge about the issue in the study (Adjei et al., 2017; Creswell, 2013; Merriam & Tisdell, 2015; Silverman, 2010). In other words, it helps researchers to select people (teachers) and learning sites because they can deliberately inform the understanding of the research problem under study (Creswell, 2013; Magnusson & Marecek, 2015). A purposive sampling technique was then used to select purposively a *study group* of participants for this study or to take a sample from the target population. The sample size was seven teachers with average years of working experience in inclusive schools between 2 to 7 years. The sample was enough since qualitative research does not involve a high number of research participants and the main goal for qualitative researchers is not generalization (Arksey & Knight, 1999; Creswell, 2018).

3.4. Description of the working area and Data collection instrument

I collected data from three inclusive schools with pseudonyms A, B, and C. I pick them because they are inclusive compared to the other schools in the surroundings, there are more variation of disabilities and they have been receiving special educational support, materials for disabled students etc. All are government-aided schools as these are called in Rwanda (government-supported independent schools), mixed-gender secondary schools, and boarding schools. Their students' achievement is at the middle level, but it varies according to the academic year. School referred to as A is located in a rural area in the Eastern province, school B in an urban area in the Southern province, and school C in a rural area in the Western province in Rwanda. The map further below shows the provinces (in different colors) of Rwanda and thereby gives some indication of the geographic distribution of the schools.

School A has 930 students in total, and among them, 30 students have disabilities such as vision disability (blindness) and physical disability (students with this physical disability use wheelchairs to move). In this school, there are thirty-two teachers; two of them are trained in special needs education to help students with disabilities; the two are mainly responsible for resources rooms, they don't have a schedule to teach students in classrooms. School B has 344 students in total. One hundred sixty-four (164) students with disabilities (deaf students) and 180 normal students. It has thirty teachers, including two teachers trained in special needs education to facilitate inclusion. School C consists of 648 students in total, with 25 teachers; all are qualified in general education, but there are no teachers with special education qualifications. It has only 20 students with disabilities. Most types of disabilities in that school are physical disabilities, but some students do not speak correctly, and others show sensory disabilities like low vision.

Seven teachers came forward as a purposive sample following initial contact with all three schools. Three teachers from school B, two teachers from school A, and two teachers from school C.

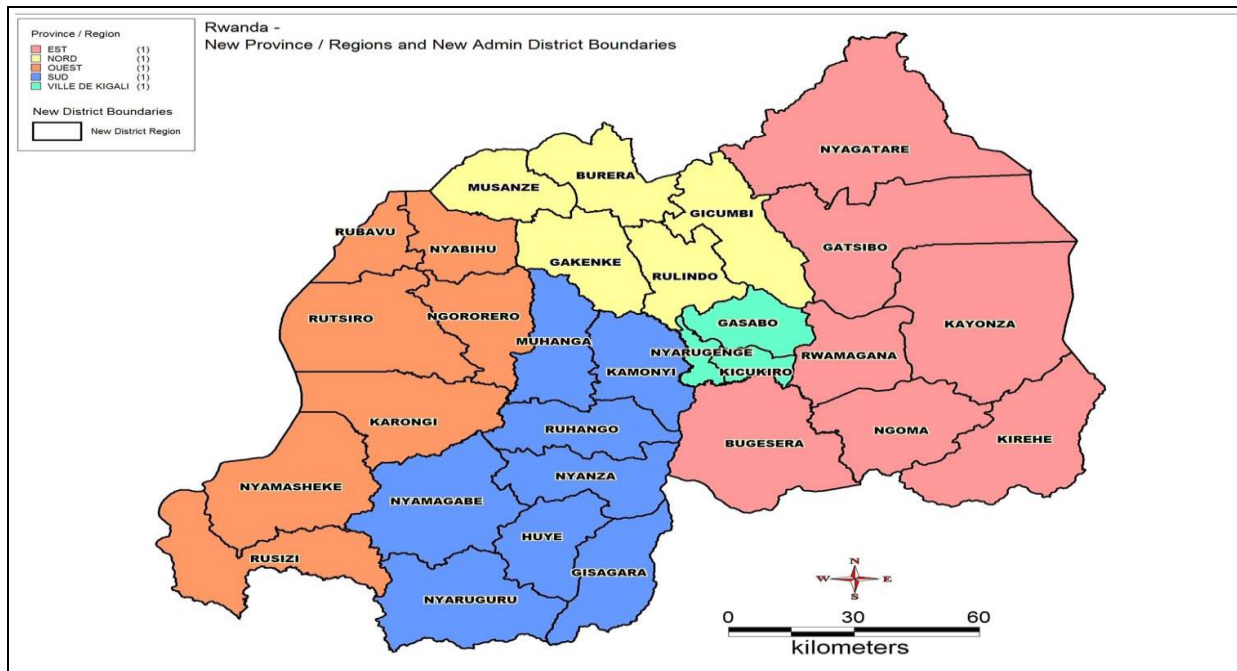


Figure 3: Rwanda map with Province and Districts

Source: (Rwanda, 2009)

Through the map, you can clearly see the province where each school is located. In the left corner, the boxes contain different colors that correspond to the province of Rwanda. For instance, the blue color corresponds to the Southern province.

In this interview-based study, I used a data collection method that facilitates me to understand the context and the perspectives of participants (Bogdan, 2003). The instrument used to collect data was semi-structured interviews. I used semi-structured interviews since it is a particularly effective data collection method that allows the interviewer to engage in probing conversation to produce in-depth insights and get meaningful data on a topic of interest (Barriball & While, 1994; Guest et al., 2013). In this type of interview, the main questions and script are fixed; however, the interview offers the opportunity to the interviewer to improvise follow-up questions and explore meanings and areas of interest that emerge (Arksey & Knight, 1999, p.7).

To learn more about research participants (even to gain some unexpected things that may be fascinating) in this study and to enable them to advance their own ideas and reactions in their own terms and ways; a semi-structured interviews guide was structured by considering the following tips- first, no way that allowed the participants to choose the responses. Second, interview questions were in open-ended format (see appendix B), and Magnusson & Marecek (2015, p.48) assert that “open-ended questions work well to elicit rich, full, and complex accounts from participants.” Third, the follow-up questions were prepared to encourage research participants to expand their opinions and redirect the participant’s attention.

The interview questions’ order and flow were adjusted. As Magnusson and Marecek (2015, p.179) confirm that “the interview unfolds, rather than adhering to a uniform preset order.” They further

recommend that it is also important to create conditions in which each participant can contribute their own material. The form and specific content of interviews vary from one participant to another because individuals are different, and the conditions may not be the same for everyone. That is, even if people may have similar understandings within the school, society, and work; nevertheless, they can share their thoughts that have particular personal elements (Arksey & Knight, 1999). Their arguments are not the same at all; they would be less or more individualist. Each interview lasts one hour and fifty minutes. All seven teachers were interviewed. During the interview, a participant was in a quiet place and tried to minimize the disturbing factors to ensure the least interruptions and disturbances from their surroundings and ensure a high-quality environment for an interview (Lobe et al., 2020). Besides, during transcribing interviews, sometimes some clarifications were needed and some additional information. Then to make sure that a participant can quickly see my message, I was informing a concerned participant to tell me more about something through text message on WhatsApp or simply by email.

3.5. Data analysis method

In empirical research, most qualitative data are oral data (non-textual data). Interviews are the most common forms of oral data (Wilson, 2017), which involve being transcribed before their analysis. He further asserts it is crucial to think about them repeatedly and extensively in order to fragment and manipulate them during analysis to find patterns or themes and meanings.

The information provided by the participants of this study was analyzed by thematic analysis. According to Braun and Clarke (2006, p.79), thematic analysis is “a method for identifying, analyzing and reporting themes within data.” So, I choose thematic analysis because it is a useful and flexible data analysis method for qualitative data analysis to find out something about people’s views, perspectives, opinions, knowledge values from a set of qualitative data (Ibid,2006). It is crucial in the production of a rich and detailed account of information or data (Braun & Clarke, 2006).

There are two ways in the thematic analysis of the identification of themes or patterns within data, such as inductive approach and deductive approach (Ibid, 2006). The inductive approach is a process of coding the data without trying to fit it into a pre-existing coding frame or the researcher’s analytic preconceptions. While, the deductive approach or theoretical thematic analysis ‘tends to be driven by the researcher’s theoretical interest in the area’ (Braun & Clarke, 2006; Wilson, 2017). As *data are not coded in an epistemological vacuum*. During the process of codification, identification of themes, I followed Braun & Clarke (2006) and Creswell (2018) arguments that a combination of thinking inductively and deductively is crucial. Besides, Braun and Clarke (2006) argue that there are no *hard* and *fast* rules about it. It is possible to do different combinations.

Karangwa et al. (2010) pinpoint that coding is ‘the process to sort and condense what is relevant to the research questions.’ A theme captures what is essential about the information collected about the research question. Braun and Clarke (2006, p.7) argue that a “theme is not only something that many data items give considerable attention, might be given considerable space in some data items and little or none in others.” So, in this study, I made an essential judgment to identify what counts as a theme (Ibid, 2006).

The interview data recorded were first transcribed to get textual data. The following steps are shown in the following table.2. The following table shows how I proceed with data analysis in six phases that are advised by Braun and Clarke (2006, p.12).

Phase	Description of the process
1. To be familiar with the data	Transcribing data, reading and re-reading the data, noting down initial ideas. Checking the transcripts back against the original audio recordings for 'accuracy'.
2. Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each theme.
4. Reviewing themes:	Checking if the themes work with the coded extracts and the entire data set.
5. Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story, generating clear definitions and names for each theme.
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, the final analysis of selected extracts, relating back to the research question and literature, producing a scholarly report.

Table 2: Six data analysis steps

It includes the six data analysis steps that are recommended by Braun and Clarke (2006) to follow when conducting a thematic analysis.

NVivo was used in the codification process; see the screenshot NVivo file in appendix C.

Table 3: Some examples of themes and subthemes resulted from thematic analysis

Questioning area (Main themes)		Findings (individual stories) Note: a teacher likely to use learners instead of student	Themes arising from quotation	Link to theory
1.Competences	-Planning and preparation	<p><i>"I can identify that some learners, for example, have intellectual difficulties or other severe disabilities. Then when I am teaching content based on the curriculum; for those with difficulties, I can even choose, plan another special exercise that can help them to improve their skills and to learn how they can live in a society"(t6, t7).</i></p> <p><i>"For someone with a disability as we have blind students, physical disability (a student who use wheelchairs to move), I try to treat him or her, I have to care for them in term of punishment, teaching, showing them that they are students like others, they can perform better in the course, sometimes I need to be flexible"(t1)</i></p>	1. Knowledge of students	Based on Danielson's framework, a teacher who performs well seeks how the students can learn by providing the opportunities that support their learning enhancement.

		<p><i>"I plan a lesson and set indicators for each difference it means that I look at every side and know what to help everyone and set the standards of their achievement depending to their abilities" (t5, t1, t4, t2).</i></p> <p><i>"first of all, I develop an instructional goal which must be 'smart' this instructional have 5elements those are: 1) condition shows the process, I will use in delivering the content, 2) audience which shows who will be concerned with the instructional goals, 3)the behavior and 4)the content and 5) the degree of performance"(t6)</i></p>	2. Setting Instructional goals and outcomes	Base on the theory, a teacher should understand how diverse learners learn and be supported to meet the educational needs.
	-classroom environment	<p><i>"In the classroom, first all, I set instructions that must be followed during the course or lesson; even after providing the instructions, I also set the punishments for students who cannot follow the instructions set. Another one is to include them and tell them they are responsible for what they do in the classroom. Any disrupting behavior after giving instructions we can punish him, tell him to stop disrupting others, then the lesson can go on" (t6, t5, t4, t3, t1).</i></p> <p><i>"I have to know my students; there are some students with disruptive behavior, others with different behaviors, so I try to harmonize, to change the place of the student with disruptive behavior to sit in front and I make the one who disturbs others to stand. And be in the position where I can see or watch on them" (t1).</i></p>	3. Management of student's behavior	Teachers try to establish a learning environment by setting rules and controlling the physical placement of students that encourage students to be responsible for what they do in the classroom. The teacher has seen these class rules as a tool for monitoring students' behavior.
	-Instruction	<p><i>"Just we are making it through assessments, and always after my lesson, I have to assess my students if they have what I was planned, what they have acquired through my lesson is meeting with my instructional goal. So, I give them questions to handle, and I can give verbal questions I give them individual exercises and quizzes, formative assessments. And I can use questions and answers. And summative assessments after each unit. I check the results and give feedback after marking those activities. These are the techniques I use to assess my students to</i></p>	4.Using assessment in teaching	According to the theory, competent teachers understand and assess students by different assessment strategies and this is what teachers said they do when they are teaching or before or after teaching depending on what they want

		<i>see if instructional goals have been met” (t7, t6).</i>		
	-Professional responsibilities	<p><i>“First of all is to give parents and other education stakeholders a time once they want to help. I take time to converse with them as long they meet me by explaining to them all the details about the challenges we are having in classrooms where I teach these disabled learners. So, we provide explanations, and I also work cooperatively hand in hand with them as long as they are providing support, I am giving them time for help” (t5).</i></p> <p><i>“We can also collaborate with education stakeholders either with conversation through telephone. We have the group WhatsApp where teaching staff, administration staff, and parents meet. If there is any special case or any communiqué can be shared through that channel and then also if a parent needs more explanation she/he can contact one of the members of the group WhatsApp” (t6).</i></p>	5. Collaboration with parents, teachers, and other education stakeholders	According to the theory, a teacher should increase the relationship with families. Teacher in inclusive school make different ways to collaborate with them and they find their assistance is essential in the education of their children
2. The skills that they believe could be enhanced or improved		<p><i>“I also need to be skilled in different strategies to help students with different kinds of disabilities; here, I can help a group with vision impairment, but I am not aware of what to do when it goes on the different type of disabilities. I want to be empowered in inclusive education”. (t5)</i></p> <p><i>“We need more skills about how good to interact with disabled students, in braille, using sign language and create a favorable learning environment for all students especially for those deaf students and knowledge of deaf students’ development because they have their ways of thinking typically different from their colleagues without disability”(t2, t1, t4,t7)</i></p> <p><i>“I want to strengthen my skills in how good to engage, interact with disabled students. Maintenance of their behavior and their inclusion in co-curricular activities” (t1).</i></p>	6. Competencies to strengthen	Competent teachers like to make self-evaluations and find the weaknesses, gaps in their teaching profession. Then seek to grow and strengthen their skills.
3. Support needed to strengthen their skills		<i>“The support I need is more training about special needs education—the need for education on manipulating special devices, machines. For instance, how to use a braille machine and translate words into braille and manage students with disruptive behavior” (t7).</i>	7. Regular and appropriate training.	Teachers are called to participate actively in the events or training that may help them to grow professionally.

	<p><i>"A teacher also needs the appropriate and sufficient teaching materials and facilities to conduct her/his teaching in a good manner" (t4).</i></p> <p><i>"If there will be co-teacher, then the workload will be decreased because the teachers will share the responsibilities) tasks. Then that we can have enough time to deal with those students with special needs" (t2, t7).</i></p> <p><i>"other support, which is needed, is to increase the books of sciences, sign language because there are only two books on sign languages" (t3).</i></p>	8. Provide adequate teachers and educational resources	Teachers have the right to express the need for resources to extend the content and have duty to manage and know the available resources for students and them.
4. Challenges and risks	<p><i>"Can you imagine dealing with disabled students when I don't have skills, training, and facilities? As I said, I lack the skills to deal with these students with SEN; it is so hard and overwhelming and boring; then to try another way, to do learning myself is again an extra task and time which I don't have" (t1). "My ability, it is zero' because I am not aware of using any special devices that may support these students with special needs(e.g., Braille), I don't know to adapt materials, for instance, translation into Braille" (t1).</i></p> <p><i>"It is complicated because talking and using sign language simultaneously is very hard and takes time since I don't master sign language. You see, I can speak, and when I want to start using sign language, it becomes a problem" (t4).</i></p>	9. Lack of competence	The educational environment presents challenges that may limit teachers from accomplishing their tasks well. For instance, if teachers did not train well to manage students' behavior and use sign language, this will hurt the teaching process. They don't have that competence.
	<p><i>we don't have enough projectors, books, and the grammar of sign language (t2, t4).</i></p>	10. Inadequate resources	
	<p><i>Sometimes we arrange ourselves, we are using the skills we got from schools, but we don't have enough support from the school or from in another side (t5, t7).</i></p>	11. Inadequate supports and assistance	

3.6. Ethical considerations

Qualitative research postures ethical issues and challenges to the investigation of people, and it ought to be concerned about guaranteeing that the interest of those participating in a study is not harmed or hurt (Halai, 2006). Informed consent was given by every research participant, see appendix A. All participants were given adequate information about the study and were informed that their participation is voluntary, and the interview would be in English. The interviews were treated as strictly confidential. Participants were made aware that they were free to refuse participation and could stop their participation at any point without consequences. They were informed that reporting their opinions

cannot be traced back to their identity; therefore, their identity is not disclosed to avoid any form of harm (the data are reported anonymously). Furthermore, to avoid any conflict and pressure on research participants, the school administrators were not informed about which teachers agreed to participate in the research.

Based on the arguments of Arksey & Knight (1999) and Magnusson & Marecek (2015) about interviewing in social sciences that interviews dominate social science research, it is important to know how to conduct it. Briefly, at the beginning interviewer give a warm welcome to the participant and puts him or her at ease. Provide a brief account of the study. Remind participants, the ethical considerations of the study and that the interview is being recorded, etc. During the interview better to keep them engaged and at ease while responding to the questions and ensure that the conversation goes smoothly. Being able to adjust the interview's conversational tone and time management is also important. At the end, the interviewer makes a good conclusion and thank the participant. Note that interview questions for this study were prepared by respecting ethics. As Arksey and Knight (1999) caution aspects of interviewing that questions of interviews must be clarified, adapted, and not lead to provide assumptions that may not be detained by the study participant. Indeed, they were approved by the supervisor before conducting the interview which increased the validity of the interview and transcriptions were shown to the participants before analysis. It was crucial to establish trust and a good working relationship between interviewer and informant. The researcher took active listening which followed by providing clarifications on the study aim when needed but keeping in mind that "participants are the experts on their experiences, views, and practices". So, the need is to be a wise listener and avoid personal disclosures and build high levels of trust and confidence, and continual attention to ethical issues.

Further, I appreciate how the participants of this study respond to the application for informed consent, and they all happy to say *yes* and no one decides to stop participating in the research. It is possible to say that the way they agree to participate, indicate how much this study was needed to allow them to express their challenges and needs for their professional growth.

4. Results

4.1. Characteristics of the participants

The participants of this study were secondary teachers working in inclusive schools in Rwanda. They are qualified in general (secondary teacher) education with different measure subjects. For instance, each participant teaches one of these subjects: Biology, English, Mathematics, ICT, Chemistry, entrepreneurship, and Kinyarwanda. Some of them teach two courses. One of them had few pieces of training in 2016 about inclusive education and how to facilitate the students with special educational needs. The proper names of participants of this thesis were not displayed to ensure their security and to avoid any form of harm. So, you will see that they have pseudonyms such as teacher one up to teacher seven. The table below shows some of their details.

Pseudonyms	Gender	Schools	Length of work experience in inclusive school	Age	Education
Teacher one (t1)	Male	A	5	They are 30 to 39 years older	They all awarded a bachelor's degree
Teacher two(t2)	Male	B	5		
Teacher three (t3)	Male	B	2		
Teacher four(t4)	Female	B	6		
Teacher five(t5)	Male	C	6		
Teacher six(t6)	Female	C	7		
Teacher seven(t7)	Male	A	4		

Table 4:Profile details of the participants

The table illustrates the pseudonyms of the participants and schools. Both female and male teachers have agreed to contribute their ideas to this study voluntarily. They are 30-39 years old, their working experiences in inclusive school range between two to seven years. Further, the average of their classroom size is forty.

4.2. Presentation of the results

The data collected from the semi-structured interviews with seven teachers were analyzed using thematic analysis. NVivo qualitative data analysis software was used for data codification. See, NVivo file in appendix C. The results revealed that secondary teachers have different competencies and face serious barriers when teaching students with multiple abilities, disabilities, and special educational needs in the same classroom or same environments. It further indicated that teachers in Rwanda have aspirations concerning learning enhancement and outcomes for all students (with and without disabilities) and the great acceptance of these students in their classrooms regardless of the challenges they face. They believe that all children can make progress - teacher six affirms that '*disability is not inability.*' The study further illustrates the needed support teachers postulated to strengthen and develop their competencies.

The results of this study are into three main themes and subthemes. They all answer the three main research questions in sequential ways. Therefore, information supporting these themes is structured by respecting the order of the questions. The three main themes are competencies secondary teachers said they have, support needed to strengthen their competencies, and the challenges they face in schoolwork.

Question 1: What competencies do secondary teachers say they already have for teaching in inclusive classrooms in Rwanda?

a. Competences

Competences are skills teachers should have to teach efficiently and deal with new challenges when they appear in an inclusive setting. The findings suggest that teachers perceived the following competencies are essential and appropriate competencies for teaching inclusive classrooms.

a.1. Using multiple teaching strategies

All teachers argue that inclusion involves having multiple competencies in order to deal with all students either having special educational needs or not. They can make suitable instructions for all students by applying different teaching strategies that may help accommodate varied students' instructional needs. The teachers explained other methods they use, teacher (t1) from school A stated: *“Well, ... I am trying to use or to vary different instructional strategies, they can make them understand. I transform my lesson into storytelling; I use learner-centered methods where learners are trying to give their points, their opinions about the topic. They are more involved in the lesson; I am not the one who teaches; I am like a facilitator since I let them do things, I help them understand the lesson's main ideas. Finally, I can also use games, role-playing”*. Another teacher (t2) from school B added, *“I try to use field visits when learners are tired. And it helps because students get an opportunity to touch, see and understand, participate in the activity. For example, when I teach waste management, I plan a field visit”*. He further added another example: *“in history where we study the topic of [the Rwanda] Genocide. Through that course, we make the trip to visit memorial sites of Genocide. We visit, we ask for some information, then we continue our lessons in the classroom. Through that, they gain skills”*. Teacher five (t5) from school C asserted, *“I can use a variety of teaching methodology and techniques in my classroom. I feel comfortable changing teaching strategies when I am teaching. I can plan an extra time to provide a remedial lesson where it is needed, or I can revise the main concepts”*; the same argument to (t7) *“I use extra hours like one hour to explain students with disabilities and other with visible weaknesses.”* Teacher (t6) from school C explained, *“I can give a formative assessment to check if the previous lesson is well understood.”* Teacher three (t3) from school B points out that he can use different methods (not cited) and the most interesting to him is *group work*.

In contrast, teacher (t4) from school B finds it is challenging to use group work and group discussion because communication among students is not good and deaf students are not more liked with their peers without disabilities in classroom group work. She gives an example *“I can use group work, and the hearing students do the exercises but do not share the ideas with students with disabilities. Some students do not share with deaf students. I am not sure the main reason, but I think and see that some students don't master the sign language.”*

Besides, (t2) her workmate also stated about the lack of acceptancy among students (deaf and regular students) by mentioning that *“their peers without disability are not happy to help and support their colleagues in different school activities (for example in cleaning, working in a group, etc.).”* Indeed, the teacher (t7) from school A added to the same topic of using group work: *“in science, it is not possible. So, would you put blind students in the group and what they are doing, they can not look at it? ...”*.

What matters in an inclusive school is to be able to accommodate the educational needs for all students. Some teachers seek to apply these different methods to ensure that all students are well involved in the lesson. So, if what they say is indeed applied in their classroom and how they vary teaching methods, then teaching will benefit all students and can be said to be inclusive in that respect. Nevertheless, including deaf students together with the regular students in the working group seems to be causing a problem among the students, which may indicate that deaf students may suffer socially in an inclusive setting, or at least in some of the activities intended to be inclusive. It might in fact be better to recreate the deaf community which is deaf schools instead of isolating them in an inclusive school: in line therefore with recommendations made by the World Federation of the Deaf, for example, the WFD (World Federation of the Deaf) is a global organization that is entirely made up of deaf people themselves—mostly indeed people who were once deaf children in deaf or inclusive education themselves; I think that makes them worth listening to with respect to deaf education: they have been there... Most national organizations of deaf people are a member of the WFD. I should further note that both the Salamanca statement and the CRPD (Convention on the Rights of People with Disabilities) acknowledge that deaf children should be entitled to deaf schools, where sign language can be used freely (Education UNESCO, 1994; UN -Geneva, 2018; WFD Board, 2018; ^{1;2}). Again, some teachers do not mention all appropriate teaching methods to increase their students' learning. It will require them to improve and have appropriate skills and continue to familiarise themselves with more different essential methods in order to accomplish their tasks well.

a.2. Collaborating with parents, teachers, and other stakeholders

The interaction with parents and the enhancement of relationships with colleagues and other stakeholders all reflect great attention and expectations to individual students' needs (Danielson, 2007). The seven secondary teachers described how they communicate and interact with parents and what they tell them during their conversation in order to seek together what can help their children. Teacher six (t6) explained the way she communicates with students' families: *“I can collaborate with parents either with conversation through telephone, we have the group WhatsApp where teaching staff, administration staff, and parents meet and if there is any special case or any communiqué can be shared through that channel and then also if a parent need more explanation she/he can contact one of the members of the group WhatsApp. ...For example, before the meeting with parents at school, we prepared marks or results for the tests, monthly tests, or monthly assessments, and then we can display/disseminate the marks. After the meeting, the school leader can ask the parents to observe the marks for her or his child to know where he/she failed. E.g., if a student fails mathematics, then the parent contacts the teacher of the course and makes more explanations. All the students' parents and teachers together can advise the*

¹ (Convention on the Rights of Persons with Disabilities (CRPD) | United Nations Enable, n.d.)

² http://www.unesco.org/education/pdf/SALAMA_E.PDF

students and next time a student can improve". She also added views: "we change the mindset of some parents and convince them that disability is not an inability... because the mindset of some parents is focusing on that if a child has a disability it means that child is unable to do anything."

It is known that teachers and parents have a crucial role in the education of children. Teachers provide some information about individual students, a brief account of the curriculum, and encourage parents to contribute to their children's education. Further, (t5) expressed that he can use messaging and telephones in order to be in touch with students' parents by informing them about the challenge a child may have the support he needs from the parents, and their student progress. He affirmed that some of those challenges could be addressed by parents or the children themselves. For example, if they do not have books, some hygiene materials. He also informs their parents that they need to find out that kind of material for their children. Besides, (t1) added his thoughts: *"what I communicate to them is the performance, discipline, and another very important thing is to work for hand and hand because the teachers can not be there, teaching their students while the parents are not involved in the education of their students. So, we tell them that they should be part of the education of their students. We tell them that we should work together, help each other to increase the education or to handle the educational problem of the students"*. T2 points out another example, once they have a child for the first time, he gets some 80% and for the second term, he gets 50%, so in that case, he could not continue without informing the parents that he doesn't know what the child is busy with then together with parents they gave him counseling by helping a child to tell the problem she/he has.

Teacher four (t4) described how she collaborates with parents in case some problem arise, *"the parent may come with showing that he/she is unhappy because his /her children results are not good and when he asks questions with unhappiness, I cannot angrily behave like him/her, then I can show them some students who succeed well and others who are failing, I could even show her/him the answer booklets of all students. ...Then I can convince that we as teachers we are also parents like her or him. I can ensure him/her that when they give us their children, they could be aware that their children are secured and get the childcare needed. I can motivate the parents to encourage their students to study purposively in a way of planning their future development; so that the student becomes courageous and his work rate increases. I tell them that the good performers are with the failure student in the same classroom, so everyone can become a good performer and make progress. Then they can become motivated."*

All teachers argue that they collaborate with their colleagues by sharing teaching experiences and challenges faced when they are teaching in school, but some claim that the trained teachers do not participate in the problem-solving of the regular students. For instance, t2 stated, *"I am advanced in ICT, and even if I don't teach ICT, sometimes I go to support ICT teachers in the computer room when they call me too and I also ask them to help me with something I don't master well. Teacher (t4) added, "because, at 90%, we use sign language in the classroom. While teaching, I can confront the word that I don't know in sign language and I can't continue teaching with that challenge that time; I communicate with other teachers to search for the solution of that challenge, I ask what sign language of these words. We work together in groups to improve our knowledge. Not only about sharing skills, but we also work together socially and economically because we have an association. When a teacher has a problem, we support him/her, and we visit him or her when there is a party one's family we participate and we give a contribution"*. Teacher five (t5) also asserted that *"sometimes I ask them advice and supports for any challenge I meet while I am teaching."* Further, teacher six (t6) announced that they have School-Based

In-service in their school by explaining that “ *we have what we call school-based In- services teachers, this one stand for how the teachers in the same school cooperate by even increasing the knowledge related to the content, through this way, we can cooperate to show the assistance to all learners with and without special educational needs.*” However, teacher (t7) disagreed with (t6) about the collaboration among teachers somehow because, in his school, they can only talk together about lessons and experiences. He gives an example that they have two trained teachers in special education, but when some problem arises involving students without disability, they don’t participate in problem-solving unless it is only for disabled students. He stated in these words, “*No, no... those teachers are not involved, they do not participate in problem-solving for normal students*”.

Teacher four (t4) contradicts herself about the collaboration she has with other teachers. She mentioned: “*The capacity I have in using sign language while I am teaching is not enough and I can teach a unit without using sign language, haha*” in an inclusive classroom. If she is collaborating with other teachers, she can not teach the whole unit without using the tool that involves deaf students. She further argues that she doesn’t know what to do by explaining that “*what can I do? we have many challenges ahh... I do not master sign language very well and no regular training!*”. The consequence of not knowing sign language very well, and not always using it however leads to, at the very best, an only partial inclusion of deaf students academically, and it may certainly hold them back cognitively. So, the importance of being involved or engaged in the learning process with this isolation in inclusive classroom activities can not facilitate the creation of crucial knowledge for these students.

About the communication with other education stakeholders, teachers (t2, t3) from the same school assert that they normally make a scheme of work at the beginning of the year and the copy of their scheme of work is stored in the educational office at the sector level, they have enough information about what teachers are doing in their teaching profession. They communicate with the local government and share some problems. In case they have a child, who is sick, they have to share the information if he/she has to go to the hospital. They collaborate again when they meet in a communal activity like ‘UMUGANDA.’ This means if they want, they can meet every month because ‘UMUGANDA’ is regularly taking place on the last Saturday of every month from 8:00-11:00. *Umuganda* is a Rwandan word for community work and compulsory for everyone (Uwimbabazi & Lawrence, 2013).

Considering the results, teacher communication with education stakeholders (parents, authorities, teachers) seems to be a way sometimes for secondary teachers to solve some problems of the children and inform them about individual student progress and what is going in the school. This can be taken as the proficient level of performance for these teachers. Based on Danielson’s theory, this level corresponds to a teacher who can communicate with families, parents about students’ learning progress regularly, respecting cultural norms, and who is available as needed to respond to family challenges or concerns. So how this social interaction within teachers help in creating teacher knowledge? The majority of teachers construct their knowledge academically through active collaboration, but some teachers’ perspectives bring out some contradictions with the theory as noted that some teachers don’t know what to do, what to learn from other teachers in order to facilitate inclusion.

a.3. Engaging students in Learning

There are many ways of engaging students in learning, either by using assessments (which are found to be essential in teaching) or grouping students and providing instructional materials (Danielson, 2007). The results revealed that inclusive teachers acknowledge that using assessment is not only to certify that a student has a promotion to upgrade to the high level of education or to retake the existing level, but it is also crucial in teaching and taken as an integral part of instruction. Teachers evidence how they keep them engaged, motivated about learning activities.

Teacher six (t6) has this to say *“here I can give some examples of the how I motivate and even I get them in the lesson. For example, ... if I have learners with vision impairment, I can find someone to help me prepare braille for them, I might also know how those with low vision, I can make a large print for them, and I can assist them by giving all those documents. I might even have some students who have a hearing impairment and can use videos even if they cannot get the sound, but he/she can observe the image, symbols and then infer the meaning. Furthermore, when I motivate them, I use praising words like congratulations, flowers, wonderful, etc. They smile, they are getting feel free in the lesson, so, it is very wonderful. When I am engaging them again, I can put them in groups. I monitor their groups, guiding them on how they can work, I can provide the assessments, and when I provide assessment, I need to measure their strength and weakness. When they finish the work I give them in the group, I invite members to present, and especially when I am going to choose the learner to present, I focus on a learner with special educational needs. So, through her or his presentation, I check if she or he is improving”*. She further asserts that she gives some gifts for the best performers; for example, after the student presentation, she can provide a pen, a notebook, ask all group members to clap the hands for him or her, and tell his /her has worked very well. This the same as how the teacher (t4) motivates her students, but she adds shoes in the gift she provides to students.

Teacher five (t5) added his arguments to the same topic that *“it is full giving them some counseling dialogues, by telling them that disability is not inability. So, we show them how strong they are. And the potentials they have in them, how they can use and improve their learning and health. So, we do encourage them through consultative dialogues. We help them to integrate themselves into society and give them some tasks and so that they can assume responsibilities in their classroom, at school. For example, we can choose a class monitor [representative] who has a low vision impairment or physical disabilities. So, that is also a kind of encouragement”*. T1 stated, *“I try to use interactive questions and learner-centered methods that allow them to share ideas, their views, to express their understanding to the point. I give them a point, so I ask them how they understand it, what they know about the point. And I try to make my lesson in the way of just storytelling so that they can enjoy it”*.

T2 added an example, *“in science, we have a lesson about complete diety, I tell them maybe in the future you will be a mother. You must keep this one in your head, you will need to know that your child should eat well. And good food. And you know sometimes I bring bread for them. I say if you maximize in this work, you can take two slices of bread. Then according to the level of success, I give them some small gift, etc. For other students, I may ask them to clap hands, give flowers to the best performers”*. He took some time to advise students and he describes, *“ I have some five minutes for information through that I talk to them that if you want to get a better life, you must study well.”* T4 further explained what it is motivating students in her classroom *“I can motivate someone when she/he is telling or giving me the*

true answer, I can ask the class (all students) to clap their hand for her/him, and telling him or her: "thank you," or I can tell other stand up and sing to him or her. And I can also tell him/her that "Congratulations." This is a contradiction to t4 herself, singing and clapping hands for deaf students as school B has deaf students, it does not help these students because they can not even hear what they are singing to them. The other students don't sing in sign language because of their poorest communication with deaf students, as t2 asserted that there is poor communication on the side of teachers and students as well, with deaf students. This means this type of encouragement is for only regular students. In fact, teaching and engage students in learning, especially deaf students, involves learning their characteristics and behaviors.

Further, t3 gave these examples about the engagement of students in learning, *"I explain the content in the classrooms and I give them assignments in a group of students to explain, discuss and share the ideas in group discussion."* T4 disagreed with him because she has explained already that group work doesn't help all students in their school because regular students isolate deaf students during exercises and t2 explained how much these deaf students are not helped with their peers without disability.

Based on what the teachers should do to engage students in learning described by Danielson (2007). Their capacity is at a basic level because instructional groups are not facilitating all students. They are partially appropriate to students because only regular students benefit a lot from them. For teachers to educate deaf students, their capabilities are unsatisfactory because instructional activities and group works exclude deaf students due to teachers and regular students' poor skills in sign language.

The majority of teachers expressed the problem of engaging special students in learning. The teachers who meet deaf and blind students complain more than teachers whose most students are with physical disability and low vision. For instance, *"I am not a specialized teacher to teach disabled students, and I did not ever train how to use braille machine. Thus, it has a negative effect since my teaching does not help all students to receive a quality education or teaching. With these inadequate skills, it is not easy to deliver content to all students especially blind students"* (t7). Further, *"inclusion of the deaf student is not easy, the communication is not perfect because sign language is not easy for everyone"* (t2). The teachers should stop complaining about sign language and braille because they were made to become general teachers, and they have not been taught before time to use sign language and braille. The important is to provide what can be better for students. Deaf students need deaf schools, where they are with other deaf children, doing everything together in sign language, that is a recreation of deaf school.

a.4. Establishing an environment of rapport with students.

Some teachers understand the importance of creating a positive learning environment as establishing the classroom climate that encourages or supports social interaction between teacher and students and students' interactions with other students. This respectful environment enhances students' active engagement in learning and facilitates the management of the student's behavior and all students can feel valued and safe. All these involve the knowledge of using communication techniques that encourage or foster collaboration. Whatever teachers try to do to ensure good interaction, interviews brought out what inclusion seems like, especially where they include students with severe disabilities like deafness and blindness. It seems very difficult because disabled students are somehow isolated either academically or socially in an inclusive school. T4 in the above paragraph indicated that she can teach

the whole unit without using sign language in an inclusive classroom and that during group work, students do not share ideas with deaf students. And t2 her colleague emphasized that *“their peers without disability are not happy to help and support their colleagues in different school activities (for example in cleaning, working in a group).”* Thus *“most of the time the deaf students like to create their own groups alone”*(t4).

It is understandable how these students feel in this situation. Besides, some teachers, interacting with the students is not their job unless a student takes the initiative to approach the teacher, as t2 described: *“they know their weaknesses... if she/he has a problem with the lesson, he informs me about the problem that she or he has, and I handle the issue out of the class. We don't have other time for them, especially when other students are in the class. It is an individual choice to meet a teacher no extra time I plan for them”*. However, t3 disagreed with him because he said, *“I just create a talk (conversation), to speak with every student in order to share my experience and encourage them and also... to give them some reinforcements”*. In contrast, t4 continued to demonstrate how is the system, she expressed that *“my interaction with students is not at the same level for all students because of sign language. Not only me, even some other teachers are scared to interact with them frequently due to inadequate skills in sign language, but we all try to make inclusive education work”*. It is found in this study that the inclusion of deaf students is not correctly working based on teachers perspectives, 2/3 of teachers educating deaf students in inclusive classroom depict clearly what really happening in their school, and they stand on the point that the problem is sign language and inadequate skills about deaf students psychology.

Here other teachers described the quality and quantity of their interaction with students and among the students themselves. It is still basic due to some of the challenges they face, not completely successful. Moreover, teacher six(t6) stated, *“the collaboration or interaction is not similar in quality and quantity because when I am interacting with learners with and without disabilities, I use the language he or she can hear. For those learners with disabilities, I still have the problem of the skills related to how I can communicate with them (better). Because they like to keep quiet, do not talk easily”*. T7 further described: *“I have a special interaction (with) my students, ...the students with disabilities need special and more interaction than normal students”*. Students with a disability involve special attention and flexibility wherever they are, they deserve it and they have again all rights to be well educated and receive a quality education. Teachers (t1, t5) in contrast points out that their interaction with all students (with and without disability) is the same. For instance, teacher one (t1) explained, *“this means that because there are in one class, ...and they (are) all my students I can not take one category differently, my interaction involves all students in a class. Like if it is to advise them, I do for all. And most of the time they come to me and I have a conversation with them....they tell me their problems they are meeting in their daily life.”* They further argue that the quality of relationships is a friendly connection, each one respects her/his colleague.

Concerning the student interaction with other students, teachers six (t6) asserted in there is still a problem in student interaction with other students. she mentioned, *“it is moderate, it is not frequently, they interact for example when they are in the clubs, they can interact with others and even they are out of the class they can participate in groups of prayers, I can say that it is not at a high level because some of the students are still not able to cooperate or know the place where they can cooperate between them.”* In contrast, t1 and t7 argued that the disabled students like to isolate themselves. T1 viewed that *“blind students are playing with the other students but they likely to play with the ones with the same*

case.” He further argues that “the school in general, teachers, school leaders, we are always advising them to work together. We used to tell normal students that they are students like them in order to help them to be familiar with them”. Students without special educational needs are sensitized to value their colleagues with disabilities (t1, t5, t6). Even though students often play with *the ones with the same case*, however, some examples indicate their relationships and collaboration, such as sitting together in the same class while studying, and those students without a disability are the ones who support them when are going in the class (t1,t7). T7 explained: “*the normal students share with the disabled students. For example, in the library activities, the normal students help blind students and explain to them which books they need to read from the library. After the classroom lessons, they explain to each other the activities that happened in the classroom for those who do not understand well the lesson*”. He further added, “*the students that are moving using wheelchairs, their colleagues help them to reach some difficult area like dining rooms, bathrooms, as our school doesn’t have the proper passways, the normal students help them to come from one area and go to another.*” Besides, t6 added that they also interact when they are in the clubs, they can interact with others in break time, and they can participate in groups of prayers.

Based on the theory, the crucial thing for some teachers in inclusive schools is to be able to manage their relationships with students and to ensure that interactions among students are supportive and positive. That friendliness and openness assume the levels of relationships (respect and rapport) t1, t5 have with their students. This interaction should be based on mutual respect and trust. In fact, it essential for a teacher to remember their responsibility as adults.

a.5. Setting instructional goals and outcomes

It is found that teachers in inclusive schools often plan the instructional goals based on the levels of their students and regarding what is required in the curriculum to address to students and where the lesson took place. Some teachers argue that the outcomes of the lesson should be clearly stated in terms of what students have to learn and how they learn and develop. Teachers tell a story about what they do. Teacher six (t6) pointed out, “*first of all, I develop an instructional goal which must be ‘smart’ this instructional have five elements those are: 1) condition shows the process, I will use in delivering the content, 2) audience which shows who will be concerned with the instructional goals, 3) the behavior and 4) the content and 5) the degree of performance. I can formulate all sets of instructions by showing that I can provide large print for learners with low vision that can help them to also achieve my goal at the level which is similar to the others without disability*” and she argues that she also consider where the lesson takes place whether in the classroom, or on the field, or in the laboratory.

Another teacher (t5) stated, “*when I am planning, I always try to cater for the individual difference. I need those indicators before designing the kind of help I can use to teach everyone. Setting indicators for each difference means that I look at every side and know what to help everyone and set the standards of their achievement depending on their abilities*”. However, t1 in contrast, illustrated, “*when I plan a lesson is for all students. Not one is reserved for this type of student. I try to make my lesson inclusive for all students*”. Other teachers explained that they base on the level of students as they set the level of achievement to be evaluated. For instance, exceptional students, if they got 75%, are excellent. In comparison, the regular one, 85%, is excellent (t7).

Further, T2 asserted, *“I focus on competence after this lesson the learner should be able to do this in his and her daily life effectively and correctly. In general, we have a curriculum that guides us in our activity; for example, there are skills, knowledge, and competence in each unit, a learner has to acquire from the unity”*. T4 described her way *“I base on the students' understanding in the previous lesson and then I base on it to plan my instructional goal for the next lesson.”* The problem is the sign language that may help deliver the content of the lesson.

While they are setting the instructional outcomes, teachers should surely be able to link the outcomes to the curriculum guidelines. Besides, they should explain how the lesson outcomes are appropriate for their diverse students and how they fit into a learning sequence. Based on the context of what the teachers have told me, even if they consider what is written in the curriculum when preparing lessons, especially for deaf students, these students are not getting what they need. They are simply isolated in their inclusive setting.

a.6. Design and Use of assessments in teaching

The teacher identified using assessment in teaching as the manner to assess how their course is going on, to monitor students' progress in the curriculum, and to know if their students have met the instructional goals. They mostly use the results of the assessment to plan for future teaching. Teacher six (t6) stated her opinions on assessment, *“I can use what we call formative assessment; this one is a continuous asking questions after teaching a lesson, during the lesson. Before starting a new lesson, I can give a formative assessment to check if the previous lesson is well understood; it helps me continue to the next lesson or revise it. I can apply other forms of assessment to check if my lesson is going well. I can give individual homework always after the course related to the lesson I have taught or individual quizzes and keep monitoring the students learning progress. I give the feedback after marking those activities, homework, formative assessments.”* She argued that the results from these types of the assessment she uses them to test her students give her the level of performance of the lesson that has been taught against the assessment criteria and performance standards. Other teachers added that they also ask different simple questions and small questions to know if they are aware of something about the lesson they are going to teach if students have some knowledge or what they already know about it. They also use some individual written questions to know student's weaknesses and misconceptions about the previous lessons and provide some pieces of advice (t1, t2, t3, t5, t4, t7). They affirm that their questions in the designed assessment show a very congruence with instructional outcomes.

Basing on the theory that guides this study, the essential parts of using assessment in instruction are to provide feedback and timeliness of the feedback. This encourages the student to participate in the further lesson because everyone will know the level of her/his performance he/she meets the required standards. Careful attention to the work and responses of the students about the activities planned for a lesson in class should be paid, especially in secondary school since they offer crucial information about how teachers can proceed.

a.7. Management of student behavior

The findings showed that teachers use different strategies to manage students' behavior and the most common to all teachers is to set a clear standard for students to follow in the classrooms and punishments for those who can violate the rules. However, four teachers still have a problem in handling the

disruptive behavior of some students and disturbance in their classes, though they set all those guidelines. For instance, one teacher demonstrated in his word, *“the main challenge I face, is the management of the discipline especially students with disruptive behavior”* (t7). Further, teachers t1 and t6 also mentioned that maintaining discipline is not easy and requires flexibility.

In contrast, managing students behavior is easy for t3 and t5, and they respectively explained, *“maintaining the discipline is not a problem and because the mixture of the two kinds of students, ones with disabilities and other ones without disabilities is very interesting to get those two experiences”* t3. Further, he argued that the discipline of normal students is lower than that of the deaf students. Moreover, teacher five (t5) described that it is *“very simple, our students!....., before we start teaching, we get guide rules to use, and also students use to set guide rules themselves and also choose someone to be responsible for the class discipline. The students own their own discipline. I find it easy to manage their discipline because they own the discipline themselves, and then I can set punishments for those who break discipline rules. There are no problems for them.”*

Teachers gave and explained some strategies they may use to control student behavior. T6 described that *“in the classroom, first all I set instructions that must be followed during the course or lesson; even after providing the instructions I also set the punishments for students who cannot follow the instructions set. Another strategyis to include them and tell them they are responsible for what they do in the classroom. Any disrupting behavior after giving instructions I can punish him, tell him to stop disrupting others, then the lesson can go on”*. Some other instructional rules are: when they enter the class, they ask them not to shout in the class, help one another, eating in the class is forbidden, and if you have a question, raise your hand (t7,t4). Moreover, there are also selected learners responsible for guiding their colleagues who are impaired (t2).

Another teacher (t1) explained how he controls student with disruptive behavior or behavior difficulties, *“I have to know my students, they are some students with disruptive behavior, others with different behaviors so I try to harmonize, to change the place of the student with disruptive behavior to sit in front, and I make the one who disturbs others to stand up and be in the position where I can see or watch on them.”* He further affirmed that maintaining students' behavior in inclusive schools is not easy requires being flexible as noted. T5 continued saying, *“for those students with disruptive behaviors, I use to assign roles and responsibilities to them and I also ask them to sit in front chairs (desks), most of the time I ask them to chair the group works, for that works, I find is (one) of the solutions of the disruptive behaviors.”*

Regarding the theory, effective management of student's behavior involves clear standards of conduct developed together with the students and encouraging students to monitor their own and the behavior of their peers, correcting each other with respect. Besides, teachers need to learn more about students' characteristics and behavior. So, monitoring can be easier and the students can follow the discipline regulation easily. Thus, classroom climate supports learning.

a.8. Recording accurate data

The results showed that educators like to know better their students by collecting some background information and other information because they may affect the success and the learning of the students. Some teachers also gather information about the student discipline, attendance, and identify students

who completed the exam, assessment, or who have other problems. The information collected they said they use them to justify the discipline results, their learning progress, and help solve some problem that may arise among the students. They said the data serve as proof.

Teachers gave the example of the kind of records they keep. One teacher (t6) stated that when they assess their students, they record different areas of improvement. Further, she gives students an assessment, and that *“it is like a judgment to measure their weakness and their strength, I record their marks, check who completed the assessment.”* After the judgment, she can improve her teaching process. This teacher record the results of students to measure the level of performance among the students and use them as an indicator to improve her teaching process. Other teachers keep records every day to monitor students’ progress in learning by using marking rubrics to check if students are progressing and how far they have achieved their goal (t4, t5).

The other way teachers said they could gather information is through conversation with students. This is another strategy they likely to use to collect, to obtain non-instructional records. Teacher (t7) described the use of the information he used to collect, *“this information is more useful when I am justifying the results of the students, for example, information related to the attendance, family background, culture religion..... Students fail maybe because he or she is not attending the class regularly maybe because of the chronic disease is mostly absent in the class, etc. I can even use it to explain to the parents how their children behave in the classroom”*. He also finds it crucial before he starts a lesson to know whether there is a student who is sick or went to the hospital and keeps that information.

Further, t5 described that *“I can also use a course survey after the end of the lesson to know if I have met my expectations, and it is in kind the information is helpful for the next planning for my lessons.”* And t1 added that he uses again the information collected during the course and in everyday student life *“to respond to some questions parents may ask about their children. For example, a parent may ask why my child is failed? Then based on the information, I can be able to justify what happened to the students and what I have done to help him or them”*.

By learning about students’ backgrounds, these teachers make sure they know relevant information about cultural backgrounds, religious practices, educational needs, and patterns of interaction that may affect student participation in the classroom and their success. And they record other needed information to monitor their learning progress. However, they should not only say they collect data but also how they store their data; so that in case one wants to check what kinds of information can obtain the data. Nobody has mentioned where he/she store data to retrieve them further.

Question 2: What do secondary teachers say they need to further develop their competencies in Rwanda?

b. Support needed to strengthen competences

When teachers are developing their career especially the novelty teachers, the challenges of becoming or developing their competencies is scary (Danielson, 2007). The results of the study revealed that it is not only for novices since the implementation of inclusive education also involves experienced teachers to develop and strengthen their competencies in order to meet educational needs for diverse students

regardless of their disabilities. Below are some of the important needed support secondary teachers in inclusive school felt they need in order to develop and strengthen their competencies.

b.1. Regular and appropriate training

The results revealed that inclusive school teachers need to grow and develop in their teaching profession through receiving adequate, regular, and appropriate training. The results also showed the specific area in which these inclusive teachers require more training, such as how good to manage students behavior; T5 stated: *“The training is also very important since I need to be trained and strengthen my skills in managing students with behavior difficulties and how good to engage disabled students especially those with vision impairment in learning activities.”* Although the training was claimed as a critical need, especially for those who need training in sign language and braille, the researcher clarified what should be the best for students and teachers.

Further, the teachers who meet blind and deaf students require training in braille and sign language since their inadequate skills in sign language affect their interaction and communication with the students. This brings difficulties in the teaching process. Teachers (t4, t3, t2) have these to say respectively *“I need in-depth training in using sign language to help us to communicate and being familiar with the students with special educational needs as well as with the parents.It will help me to teach deaf students very well.”*; *“communication is very difficult because of the lack and insufficient skills in sign language for teachers.Getting continuous training in sign language will help me to communicate with deaf students well in my school and from other schools. I need to be trained to get more information regarding the teaching process, student behavior. If possible, I have to be trained in every corner to improve my teaching professional work.”*; *“we want regular training in sign language to strengthen our communication because we don't have many skills in sign language. Bad communication or interaction between teachers and students sometimes make the teachers not achieve our objectives.”* Their tone of voice showed that they are worried about sign language and communicating with deaf students.

The teachers said they need to learn sign language, which is that they can do so in time and to a high level of standards to enable inclusion for deaf children. However, there are many implicit assumptions that are a part of, than just saying they need to learn sign language. And all these assumptions are misleading. My understanding and based on arguments of experts in deafness [e.g., Ernst, Robert, Janet, Rose (2002) and Eriks-Brophy & Whittingham (2013)]; they are misleading because not only do take a teacher's time to learn sign language. He/she is still there doesn't know how to teach these children best, as noted in the teachers' perspectives that they don't have specialist training to teach these children. If they are going to learn sign language at this time, it will be fun because teaching deaf children well means that knowing more about them than just sign language; because deaf people develop inclusive quite differently to hearing children. Based on Anderson (2017) argument, *“they have unique needs that set them apart, such as the need to develop auditory skills, sign language expertise, awareness in how their hearing loss impacts them, skills in use/troubleshooting hearing devices, and eventually, become competent in self-advocacy skills if they are to become full participants in the classroom.”* They need a different curriculum set in their order. This unique access and learning needs of deaf students can not be meet sufficiently and appropriately within an inclusive setting (Anderson, 2017; Rose, 2002; Sacks, 1990). It is essential to acknowledge that young deaf people have unique and learning needs to belong

in their language community. Language should be completely accessible to a child. If it is not, and reasonable accommodations are not made, then it is not an inclusive educational setting for that child. Besides, classroom teachers who assume that they can take a sign language class and become fluent signers and language models do not understand the complexity of sign language.

They need to know the psychology of the deaf students, knowledge of deaf students' development, (t2) claimed: *“they have psychology, which is not the same as others, they have their ways to react and interact in the classroom. It is better if I can have some skills about their thinking. Because sometimes..... I can not even know what they want”*. At least they can have more training on deaf student development.

Teacher six (t6) emphasizes getting more training on caring for, monitoring students with disabilities, and those with special educational needs. The same argument to t5 since he needs to be trained and strengthen his skills as well in managing students with behavior difficulties and how good to engage disabled students, especially those with low vision impairment in learning activities.

The teachers who include blind students in their classroom show that seeking someone else to prepare braille for their students is another way to lose time. Teacher one (t1) has to say about this topic, *“the support I need is more training about special needs education. The need for education on manipulating special devices, machines, for instance, to use braille machine, to translate words into braille”*. This claim is very common to what t7 requires and he added that if he gets a chance of being trained, it will be better for him and all students. Because, he said, *“with inadequate skills in teaching disabled students, it is not easy to deliver content to those with disabilities especially blind students.”*

b.2. Provide adequate teachers and educational resources

It is found that the supply of special education teachers into inclusive schools can increase the capability of some teachers who lack skills in specials education. Because if they afford teachers adequate time to sit together talking about the inclusion of disabled students, the general teacher will gain more experiences and be supported by these teachers. By providing educational resources like books on sign language and grammar and books about teaching students with disabilities and methodology; then teachers can familiarize themselves with sign languages and different important teaching methods and become proficient and confident in using them. Teachers postulated: *“provide books talking about students with special educational needs and methodology to teach them. Schools and other stakeholders can provide enough assisting devices. Even teaching aids, it is still a problem we also need improved and appropriate teaching aids”* (t6); teacher three also added the increased books of sciences.

Further, the teachers also need the appropriate and sufficient teaching materials, aids, and facilities to conduct her/his teaching in a suitable manner (t1, t4). For instance, enough materials for ICT because deaf children like to study computer sciences as they are visual. They need more visible and manipulative tools because deaf students are good performers in practice than in theories and languages (t4); *“we need projectors in classrooms that can help us to teach the students. Because moving from class to computer room it is another way to lose our time. One computer room and all teachers who want to use technology are supposed to come with students in the computer room and all students can't be inside at the same time, but the time each class will have the projector, it will be very easy, save the time to do others things”*(t2). And teachers in school B added that *“we need braille machines and*

computers, how to use translator machines, writing using braille, how to translate normal words to braille words, and how better to engage these students in learning activities.”

Most teachers claim co-teachers whom they can be running the course together because they are overloaded. This is supported by some arguments teachers expressed: *“we need co-teachers at the secondary level. If there will be co-teachers, then the workload will be decreased because the teachers will share the tasks”* (t2). *“As we are overloaded, sometimes we don't have time to deal with those students with SEN, so, I am requesting support of having more teachers so that we can share that responsibility, then that we can have enough time to deal with those students with special needs”* (t1). *“We also need more teachers in our schools”* (t7). They suggested that having more trained teachers in special education may support general teachers to improve their skills through collaboration.

My understanding is that there is a lot of things to teach blind children than getting a braille machine. Although, teacher get braille and learn how to use a braille machine, which I think will not happen in the six years a child should be in a school, as it is not easy to read braille; and to teach braille to a child and read large print involves very particular teaching skills. So, how can these teachers teach blind students if they don't know how to do that themselves? For instance, teacher seven (t7) was upset and explained, *“for example, I have blind students in the classroom then sometimes they make mistakes while they are taking summary with their braille machine. It is a problem because I am not able to help him or her and I don't have a co-teacher or a specialized co-teacher to support the learner.”* And he further suggests that these students need a special teacher qualified to teach them. Additionally, this seems understandable because working in the system they work in is not inclusive education.

b.3. Financial supports

The teachers said they often want to enhance their capabilities. As it is seen in the challenges, some argue that they don't have adequate opportunities to develop professionally, like having seminars, educational trips, and workshops with other successful people working in inclusive settings. They want to be financially supported to increase their skills. Some teacher's statements support this: *“First, I need the financial support because I need to learn, to increase my skills, it requires financial means (money, scholarship...).* As I said, I need skills in ICT that may require a computer to help me to learn, and it can come from the government especially as long as I don't have the partners, the government could be responsible”(t5). *“A teacher also needs the improvement of his /her living standards and level of studies”* (t4). *“We need to increase our knowledge in education if I have a bachelor's degree I need also master or Ph.D. qualifications. This requires some financial support”* (t3).

b.4. Adequate assistance or contributions of educational stakeholders (parents, other authorities)

Teachers demonstrate that strong collaboration with stakeholders may help in inclusive schools. They need real support from them, like encouraging their students that disability is not an inability, to stop telling disabled students that they are doing anything in their school and keep bringing their children to inclusive schools. Besides, they want them to give them a good example. They sometimes wish the school to invite some disabled people who are successful in their studies to come to motivate their students. Teachers claimed: *“we need the assistance from external stakeholders, government, local communities, parents, to convince the children with disabilities that they can learn and succeed and if*

they have the spirit, the process of inclusion can make them good persons. The school and other stakeholders can provide enough assisting devices” (t6). “I need to develop knowledge and pedagogical skills by making some field visits to see how the other teachers in the excellent school do their things. I advise the school administrator to organize sometimes the educational trip or seminars, workshops” (t2).

Furthermore, they require the parents to keep participating in the education of their children. Teacher three added his view, *“I need support from parents because students who came here have so many different behaviors, so maintaining different students’ behaviors from different areas is so hard. Parents need to be involved in the maintaining of their children’s behavior in order to put them in a good way” (t3) and to help to handle the educational problem of their children (t1).*

b.5. Improving school infrastructure

Teachers have seen infrastructure in their school not supportive for disabled students and they wonder support to improve them and put appropriate classroom resources. They claimed that the infrastructure does not facilitate the learning and teaching process correctly. Their school buildings need to be improved to meet the standards and accommodate the demand of learners with special educational needs (t7, t6, t3, t1). For instance, t6 claimed, *“school needs to improve their buildings to meet or accommodate students with special education needs”* to make reasonable accommodation for disabled students.

Moreover, teacher three added the *“Infrastructure is not good, need to be improved; construction of the grounds, e.g., football ground, basketball ground, and volleyball ground to motivate the learners to interact through play”* and creating appropriate pathways for students with disabilities (t1,t7).

Question 3: What challenges do secondary school teachers say they face when teaching in inclusive classrooms?

C. Challenges

The findings indicated that most teachers in inclusive schools meet different challenges when teaching diverse students in the same class. It worsens for those who are not trained about special education and working in inclusive schools containing students with severe disabilities like blind students and deaf students.

C.1. Lack of competence

Most of the participants identified different inadequate competencies they are worried about and feel can affect their teaching process. For instance, *“we have blind students and I do know anything about the use of the special device they use, my ability in operating special devices is zero because I am not aware of using any special devices that may support these students with special needs(for example, braille), I don't know to adapt materials, for instance, translation into Braille”(t1), “I don't have skills in braille” (t7).* They (t1, t7) found a lack of skills in braille as a big issue and time-consuming to see who can translate words for them while preparing tests and notes for students. They feel it can be better to have these skills as noted in support needed. In another example, teacher (t1) raised the voice and stated that *“Can you imagine dealing with disabled students when I don't have skills, training, and*

facilities? As I said, I lack skills to deal with these students with SEN; it is so hard and overwhelming and boring” but he mentioned that he tries to find someone who can translate his test, his homework, quizzes he wants to give them, to make it easier for those students who use braille.

For those including deaf students, communication is the most challenging since they don't have adequate skills in sign language and some facilities like books and grammar of sign language. Teachers have some stories to add to this topic: “It is very difficult because talking and using sign language simultaneously is very hard and takes time since I don't master sign language. You see, I can talk and the time I want to start using sign language it becomes a problem”. She further argues that her capacity in teaching using the sign language is not enough, “I can teach one of the units without using sign language.” Further (t2) asserted, “sign language is not easy for everyone and communication between teachers and students is not good. There are also teachers without skills in sign language because some teachers can not communicate in sign language with deaf students”. So, delivering the lesson's content equally is hard and difficult since sometimes students do not assess sign language. They further said that “when communication is cut with those who are deaf” or, for example, the time they missed the sign language of a word, “it is the learners of hearing impairment that help to find the sign” t2.

Teachers also express inadequate competencies (a) in control of students' behavioral problems in the inclusive classroom, e.g., “the main problem/challenge I face is the management of the discipline especially students with disruptive behavior. For example, a blind student can get up and falls on a chair in the classroom without my knowledge and some students start distracting the whole class. So, managing students with their peers without disability but with disruptive behavior is difficult” (t7). (b) in many instructional strategies, e.g., “I am not familiar with many teaching strategies that may enhance the learning of disabled students” (t1). (c) in special education and inclusive practices, e.g., “I am not qualified to teach those students with disabilities if I teach in my way I teach normal students, it means that those blind students will face problems because I do not have the capacity to teach them. When I set the exams, they cannot succeed well because through that way of teaching those students. Those students need some teachers that are qualified in special education or trained well to teach them” (t7). (d) To keep all students engaged or focused in the learning, for instance, “blind students use machine braille in writing, when they tap they make sound pollution in the class. Other students can not hear well since when blind students tap the machines make a lot of sounds, some become nervous and distracted. And it is hard for me to manage students in class during that situation” t7.

They further agreed that one of the consequences of lack of competence in using special devices and inadequately trained teachers is that, even available learning materials will not be used to help learners because of lower skills of teachers about special education and how to use some tools that may help in teaching and learning process (t1,t5).

According to these results, this type of teaching of these teachers in inclusive schools can not help much in ensuring inclusive and equitable quality education because some students are not getting what they need.

C.2. Increased workload and classroom size

According to teachers' perspectives, they are overloaded in an inclusive setting. Besides, the number of students per class is high. They find these as challenges to handle to ensure quality teaching and

education. For example, teacher one(t1) asserted: *“The big challenge, you know, more student with a disability, they need more time, they need extra time and as we are not many teachers, we do not have enough time to support these students with SEN, because of being overloaded, so to get time for ...being with those students is a challenge.”* Another(t6) added that *“the workload is so too much because we need to focus on those learners with disabilities and the other side those learners without disabilities. So, for everyone, I need to prepare something that can help him or her to achieve the common objective that we have set. At that time, it is hard work, and it is like double work”*.

They claim that the big size of the student also increases their workload during evaluation and feedback. For example, they explained: *“the classroom size is another challenge because if we have a big number within the class. Teachers also do a lot of preparations, evaluations, and marking which are also tiresome for us”* (t5). Further (t1) added that *“big size of a class, here I mean a big number of students in a class so, to give them work, and get feedback to them requires too much time, even to group them in different groups it is not easy plus disabled students. It is not easy work.”*

C.3. Inadequate resources and appropriate infrastructure.

The results also revealed that teachers are challenged by inadequate personal and physical resources accompanied by poverty of the schools and inappropriate infrastructure. They claimed that they met some challenges because the schools do not have enough required materials to help students with special educational needs during the teaching process, not enough services, for example, regular training for teachers, the projectors are not enough to facilitate their teaching, and no books and grammar of sign language (t6,t4,t2). Other examples, students don't have enough equipment(braille) and digital recorders to help them to revise their content of the lessons(t1,t7,). Teacher five supported the topic and explained that *“lack of special teachers (teacher trained to support inclusion) and inadequate teaching materials in our school may probably mean teaching and learning through a challenging environment. It means that the ordinal teacher will not be able to help learners with special educational needs successfully. Number two, students too will not feel comfortable learning in these types of schools. Number three, some learning materials will not be used to help learners because of lower skills of teachers about special education and how to use some tools that may help in teaching and learning”*.

The infrastructure in their schools is not good as they stated *“Infrastructures in our school are not properly to help students at all, our school does not have good infrastructures to help the disabled students, they should be improved. There are no pathways to inclusive education that help disabled students to leave from one area and reach the other”*(t7) and *“when you have blind students and those who use wheelchairs they need pathways or passways to get into their classes”* (t1). This contrasts with the t5 argument by saying, *“It is a safe and good school; It has a good environment or good infrastructures the students learn well.”* However, he did not specify if it helps disabled students, but his workmate t6 disagreed with him by saying that their school infrastructure does not facilitate disabled students.

As teachers are working in different schools, they also lack different resources to do a better job. But the common thing is that they all lack appropriate infrastructure and adequate special or trained teachers. Teachers in school A mostly claimed co-teachers, the proper pathways for students who use a wheelchair to move, light stick for blind students, braille machine, digital recorders for blind students, braille books,

appropriate bathrooms for disabled students, and inadequate teaching aids. For C, there no special assisting devices to help students with low vision like classroom adaptations for students with low vision, no magnifiers, and inadequate teaching aids. Educators in school B expressed the lack of sign language books and grammar, co-teachers, interpreters, few science books, projectors in their classroom, grounds for playing games like football ground, and accommodation for students. Both schools B and C have inadequate teaching aids. I don't think interpreters in the classroom are a good idea because it can be very hard for students to follow the interpreter and teacher at the same time.

C.4. Inadequate supports

Teachers claimed that they are not supported. They try to manage the situation themselves. They said: *"Sometimes we arrange ourselves, we are using the skills, we got from schools, but we don't have enough support from the school or from in another side"* (t5). Another teacher (t1) added that *"we are not supported at all as I see. I don't see any support from anywhere. We don't get support to help the learners with special educational needs. The support is only for students, and they help them get school fees and get other materials, for example, their machines. But they are also not enough"*

My interpretation is that these teachers can not say they are not supported at all because at least they said some materials are inadequate, but they are there; they also have health insurance from Rwanda Social Security Board (RSSB). But, on the other side, teachers need to be supported to meet the needs of students with multiple special education needs.

C.5. Inclusion of disabled students in co-curricular activities

Teachers struggle to include students with severe physical disabilities like those using wheelchairs to move. Teachers state that it is difficult, complicated for that case, we can say that for those learners with severe physical difficulties, we only help them as a conversation, but for co-curricular activities like sport, it is so difficult they do not participate in them (t1,t7,t6). Besides, it is not very easy; but some with just some minor physical impairment *try to participate in different extra-curricular activities like sport, keeping hygiene in the school, clubs*. They acknowledge that *"it is not easy because their disabilities do not allow them to participate actively in co-curricular activities together with their colleagues without disability"* (t3). Teacher five also said, *"it is not very easy; they try to participate in different extra-curricular activities like keeping hygiene in the school."*

C.6. Inadequate teacher training

Based on the opinions of teachers, most of them are not trained in special education and using special equipment. The following statement explained the topic *"the barrier, for me, I am not trained in using braille. When I am conducting my lesson, those students who have disabilities do not follow me well. When I write on the blackboard, they can not see, and they easily forget what I said during the lesson. My teaching is not well because I am not well trained about teaching the students who have the disabilities"* (t7). Teachers are insufficiently constructed in the field of special education and inclusion practice (t1, t2, t4, t7, t5, t3). Despite whatever challenges, they try to work to enable inclusion but not the inclusion of all.

5. Discussion

5.1. Introduction

This section indicates the connection between the current research and literature review and identifies what we can now add to what is known on this topic, with regards to education in Rwanda. Many of the findings have an essential connection with the earlier research, but some results disagree with the ones obtained from the previous studies done in this field.

5.2. Discussion of the results

The present study explored in detail Rwandan teacher's perspectives on competencies they have for teaching in inclusive classrooms, the support they need to develop their competencies, and the challenges they face in an inclusive school. The results revealed that teachers in inclusive schools know when they are competent and lack competence. They are therefore aware that they need to develop more skills to teach students with special educational needs alongside their peers without special education needs in the same environments. The competencies they said they have, have been identified in the above section; they cover such things as good communication with students' families and other education stakeholders, try to vary teaching methods, setting instructional goals and outcomes, etc.). However, they are primarily at an average (basic) level in relation to Danielson's theory that was guiding this study. The competencies noted by the interviewed teachers fall short of a high level on Danielson's model because their instruction seems in fact to exclude some disabled students (e.g., deaf students) due to the inadequate/lack of skills in sign language. These students are furthermore also excluded socially by their peers without disability in most of the school activities.

Further, according to Danielson's theory, to bring about inclusive outcomes for all students would require teachers to have a deeper and more flexible understanding of the teaching profession than they are presently showing, in order to enable students to move beyond memorization to analysis and interpretation: "high -level learning by students requires high -level instruction (skills) by teachers" (Danielson, 2007:15). Indeed, other studies have indicated that suitable adaptation of instruction to students' needs and accommodation of students' educational needs in inclusive schools depend on teachers themselves, their competencies, an adapted learning environment, and on suitable language proficiency (Akalin et al., 2014; Cate et al., 2018; Charlotte et al., 2021; Haug, 2017; Illeris, 2009; Leifler, 2020)—a very tall order indeed.

Cate et al. (2018) and Illeris (2009) assume that teachers must have significant potential to deal with all the challenges, issues that may arise while teaching in an inclusive school. The teachers interviewed in Rwanda manage for example to collaborate with their colleagues even though there seems not enough time to really learn from each other; even so, together they try to solve problems that come their way. Clearly conversation among teachers allows them to improve their efforts and often identify the source of their struggles in the classroom, such as when their lessons are not going well (Danielson, 2007). Florian (2014) argues that teachers in inclusive classrooms should suppose that they can teach all

students, and this too seems true for the interviewed teachers in Rwanda. They do believe that they can teach all students in inclusive classrooms, while at the same time making various assumptions about support, they need to improve their competencies to enable inclusion. What is therefore impressive about these teachers in Rwanda is that they manifest such belief and enthusiasm for growing professionally while at the same time recognising their need of various kinds of (practical) support.

Further, some teachers understand the importance of creating a positive learning environment, such as establishing a classroom climate that encourages or supports social interaction between teacher and students and student interactions with other students. This respectful environment enhances students' active engagement in learning and facilitates managing the students' behavior, and all students can feel valued and safe. Managing environments that are supportive and respectful of inclusion involve knowing how to use communication techniques that encourage and foster collaboration. As shown in the results part, the teachers, including deaf students, establish this safe environment; yet the study finds it is difficult for them because poor sign language skills in both teachers and hearing students in fact impede interaction and collaboration with deaf classmates.

Apart from having different competencies and beliefs, teachers face other challenges that affect the teaching and learning process, including impediments to strengthening their skills to enable inclusion of disabled students. The lack of competence in sign language and braille proves a significant challenge to quality education for signing students and blind students in inclusive schools. The Canadian Hearing Society (2013) noted with respect to education in Canada that educators' lack of sign language proficiency mean that access to education is, in essence, being withheld from signing students—the same conclusion seems to hold for Rwanda. Deaf children may use spoken language, or sign language, or a combination of the two. Whichever is that case, classroom communication should of course at all times be completely accessible to the child.

For the past 100 years, deaf children have been pawns in an argument over language. Mainstreaming will, I would have thought, prove to be the future structure for most deaf children; but it will also most likely create another generation of deaf adults who will feel isolated and most likely less educated. Everyone needs to feel they belong in the world; deaf children are no exception. However, the people who decide in deaf children's best interests, are almost inevitably themselves hearing. I believe that sign-bilingualism should be available to those deaf children who prefer sign language as their mother tongue. For those deaf children who can learn to communicate via spoken language, sign language can nevertheless be a highly welcome additional language. If deaf children have the opportunity to become sign-bilingual and take their education in that form they will obtain the best of both worlds and when they reach adulthood, can decide themselves on their identity and their communication preferences.

Good access to sign-bilingual education seems to provide the only guarantee that deaf students in Rwanda can learn and not just struggle with the words they need to access before they can learn. This would require that teachers also be fluent in both sign language and spoken language. Unfortunately, the Rwanda teachers working in inclusive schools with deaf students themselves noted they lack sign language skills, so that they teach without sign language in an inclusive classroom. It seems moreover unlikely that all teachers, when faced with deaf students, can learn sign language in time to support deaf students' access to inclusive classrooms. Being fluent in signing language takes a long time due to the language's demanding complexity (Sacks, 1990). Teachers who—like the interviewees in this study—

believe they can learn sign language in time to support their students clearly do not fully grasp how much time it takes to acquire the necessary language fluency. Fully inclusive education would even so not be achieved, because the hearing students in the classroom are unlikely to all learn sign language, so that signing students will still be socially and linguistically isolated from their peers. It therefore seems logically to follow that deaf schools are needed, as the World Federation of the Deaf itself strongly advocates (WFD 2018), to ensure that deaf students can meet freely with peers and have unimpeded access to quality education.

Some studies propose introducing interpreters into the classroom; however, it is hard to see how such suggestions facilitate inclusion. Deaf students will then be entirely dependent on the presence and mediation of interpreters for their inclusion, and they will still lack the language community that is needed for their signing skills to develop and flourish. Hence for deaf students as for all students, sharing matters of everyday life without communication being constantly foregrounded as an issue is a prerequisite for social inclusion. Without such, deaf students in the mainstream will be isolated and have no role models and peers. Besides, it has been shown that peers without a disability have a negative attitude towards deaf students in Rwanda, similar to Gurgon in India, where Yadav et al. (2015) found that many regular students do not accept disabled students.

Teachers in school A announced the scarcity of skills in braille, which is a particular machine used by blind students, and in other special devices. They claim to need a braille machine and training on how to manipulate such special devices. Like learning sign language, learning to use a braille machine is however not an easy task; teaching blind students how to read braille, and using a braille machine fluently, is an even bigger task and normally set aside to specialist tutors. Some of the interviewed teachers therefore quite rightly note that they are neither qualified nor trained to teach disabled students with severe disabilities, like deaf and blind students. That is similar to Khoaeane (2012) finding that teachers without these skills have difficulties answering questions asked by blind and deaf students in inclusive settings. An example of such similar issue in the present study is (t7) *“I have blind students in the classroom then sometimes they make mistakes while they are taking summary with their braille machine, it is a problem because I cannot help him or her.”* As teachers said, such students may master some of the lesson’s content, but ensuring that all the students in inclusive classrooms get what they need in the teaching process seems pedagogically highly unlikely.

Teachers in inclusive schools, like the teachers reported in this study, seem to be overloaded, have many students in their classes, are required to work hard, while classrooms are still not accessible to all due to the great diversity among students. Like teachers in Brisbane, Australia (McKay 2016), being overloaded and other challenges contribute to teachers’ burnout; the same was found in other countries such as Turkey and Thailand. Teachers in India too have big class sizes. Like all those teachers, Rwandan teachers too need co-teachers to share the tasks and to run classrooms together. Co-teaching may also help to manage students with disruptive behavior, such as in school A.

The educational infrastructure does not facilitate inclusion of disabled students when it is not adequately resourced (e.g., lack of book in sign language, inadequate braille, and teaching aids). Khoaeane (2012) and Zwane & Malale (2018) in Swaziland found in their results the same issue of inappropriate school infrastructure and lack of resources for inclusive schools. There is a need to improve school infrastructure, for example, making appropriate pathways for disabled students, game grounds and

projectors, etc., especially in schools A and B. So, better to seek how to provide adequate resources in good infrastructures.

In summary, the implementation of inclusive education requires all educators to be adequately trained, according to the proponents of inclusion, to meet students' diverse educational needs. Most of the participators in this study noted that they are not trained well in inclusive practices. However, they still have the enthusiasm to grow professionally, either by training on the job or by gaining scholarships for further study. Despite the difficulties Rwandan teachers face, they show a great acceptance of disabled students in their classrooms and believe that all students can join the learning process. While other researchers found that teachers do not want children with special educational needs in their classrooms (e.g. Akalin et al., 2014) or feel that they are not responsible for special students (e.g. Florian, 2014). Rwandan teachers are aspiring to enhance the learning of all students that come their way. In short, they try their very best to make inclusive education work.

5.3. Limitations

Although this study was carried out to some extent in keeping with the planning that was done, some limitations did arise in the course of conducting the study. First, rules for avoiding the spread of COVID 19, especially in Rwanda, like lockdown, meant not being able to travel from one district to another, while some schools closed altogether. This happened all the time while I was trying to collect data. One limitation was therefore not being able to access research participants physically. So, the researcher used video calls and WhatsApp phone calls to conduct interviews, which was very helpful in this pandemic time.

Second, one respondent postponed his interview due to sickness. This meant that the interviews did not end at the planned time and the start of data analysis was delayed.

Third, there was some obstruction in clearly defining inclusive education and competences due to the complexity of those terms. For instance, there are disagreements between proponents and opponents of inclusive education and different understandings of what is meant by competence in relation to inclusive education. The most obvious consequence of that is that the researcher can also not be sure to have reached full agreement on those meanings with the study's respondents, who each may have followed their own understanding of what inclusive education and related competences mean.

Finally, the study may have been limited by the time it took to transcribe the data: transcription ended up taking a significant chunk of the time available for the study as a whole. However, the researcher paid attention to this step because it constitutes a '*bedrock*' for the rest of the analysis (Braun & Clarke, 2006). Many hours also were reserved for that step. Moreover, despite the study being a qualitative one, the results are restrained to the area under investigation. In other words, generalisation only makes sense against a clear understanding of how the context from which data were collected might affect such generalisation.

6. Conclusion and Recommendations

A high level of teaching skills facilitates inclusive education. However, whatever teachers may claim to need and claim to do may not thereby ensure an equitable education for all students. Besides, it is even more challenging to meet the educational needs of all students in an inclusive setting especially in developing countries with limited resources like Rwanda. The study exposed that inclusive education clearly falls short when it concerns itself with including students with severe disabilities, like deafness and blindness. However, the following recommendations might help to achieve quality education. They may also contribute to the Rwandan plan of ensuring quality education and help to stop teachers' worries in inclusive schools.

First, teachers claim the lack of competence in sign language and braille and express the need for training about sign language to enable the inclusion of these children. However, there is a lot more to learn vis à vis deaf students other than sign language. And it does not make sense to teach regular classroom teachers sign languages because they are unlikely to become sufficiently fluent in time. Deaf students will likely get a poor education initially because teachers are still learning sign language, and by the time the teacher gets reasonably fluent in sign language, the student is likely to have left the school. This means that there is little point in teaching sign language to teachers when a deaf child is already in class. Many studies, and the current study, therefore conclude that sign-bilingual, and very likely all deaf students, might best be educated in deaf schools—this is not at all itself against principles of inclusive education, as the WFD itself has noted (WFD 2018).

Third, inclusive schools should be able obtain appropriate resources, specialist support and an adapted curriculum, for example from a national resource centre providing such resources.

Fourth, such a national resource centre might also provide rapid and regular training programs about disabled students' behaviour, about effective inclusive practices, and monitoring of the achievements of students with special educational needs; those provisions might be supplemented with ambulant or visiting specialist services that can quickly respond to teachers' needs.

Finally, trainee teachers and working teachers might be encouraged to adopt Danielson's Framework for Teaching while working towards more inclusive classrooms, since it is practically useful for all teachers, whether new or experienced, to help them improve their teaching skills.

Interviews are an essential method of gathering data in qualitative research. However, what people claim to think, feel, or do does not necessarily align well with their actions. So, **further research** may consider collecting data via observational methods, fieldwork, and classroom visits to check if the competencies that this study identified are indeed being applied in Rwanda's classrooms. Research might also usefully ask students to which extent they thrive in their inclusive setting: after all, inclusive policy is designed to address their learning needs.

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Appendices

Appendix A. Informed consent form

Informed consent for participation in a research

Dear participant,

My name is Marie Delphine KWIZERA, from Rwanda. I am doing an International Master's program in Educational Research at the University of Gothenburg (Sweden).

I would like to do an interview with you for my Master's thesis research entitled: "Challenges and competence in teaching in inclusive classrooms in Rwanda".

You are invited because you work in an inclusive school. Your teaching experience will help me to highlight the daily challenges that you and other colleagues working in inclusive education in Rwanda face.

The study intends to explore teachers' perspectives on competences, the need for support, and the challenges you face in teaching in inclusive classes.

Teachers, Government authorities, education stakeholders, and parents can benefit from the study since it will map what can be improved in contribution to the Sustainable Development Goals 2030, and the targets and plans of Rwanda about ensuring inclusive and quality education. The study is expected to evidence teachers' present competencies (and capacity for professional growth) towards designing inclusive learning experiences for their students. It can help government and school administrators to respond to support needs that teachers report having.

The interview is estimated to take 1-1,5 hours. Interviews will be audio-recorded and transcribed for analysis. Your participation in this study will be treated as strictly confidential. It will not be possible to link the interviews back to individual participants. Your identity will therefore not be disclosed in my study.

You are of course entirely free to refuse participation. You may decide to stop participating in the research at any time without consequence.

You join my study by completing and emailing me the consent agreement below.

I acknowledge that I have been informed about the research plans presented by Marie Delphine Kwizera. I understand that they are part of a degree project in a Master's program of study that is based at the University of Gothenburg, Sweden, and I assent to be a participant in the study.

1. About you

Full name

Gender:

Age:

2. About your school

School name:

Country:

Province:

District:

What type of disabilities do special students you teach have? (please list them)
.....

2. What teacher qualification, do you have?

3. How many years have you taught in inclusive education?

Please email the completed form to mail to mdelphina19@gmail.com

Appendix B. Interview guide

The interview started by giving a warm welcome to the participant and remind them of the purpose of the interview. And reminding them of the ethical considerations of the study. It ended by thanking them for their participation.

1.1. About background information about the school of the respondent.

1. What is your school location? Country, province, and district
2. Is it in the capital city or is it out? Is it located in an urban or rural area?
3. It is government or private school or a government-aided school?
4. Is it a country science school? or
5. How big is the school?
6. Does the school include girls and boys? or
7. How many teachers are in the school?
8. Are all teachers appointed to teach full-time?
9. Is there any special education teaching staff available to support inclusion?
10. How many people are there in schools that support these inclusive education students?

11. How many teachers, do you know that have a particular qualification related to teach special education needs in your school?
12. What is the average size of students in your classroom?
13. How many students have special educational needs?
14. How is your school performance or achievement? What shows that your school performs well? Can you perhaps give some examples?

1.2. Specific questions

- 1) What are the barriers or challenges do you face when teaching in inclusive classrooms?
- 2) What strategies do you typically use to check students' misconceptions, weaknesses, or understandings as you start a lesson or a new study or new focus of learning? Can you perhaps give me two or more examples of that?
- 3) How do you adapt instruction for students who might need extra time or those with special educational needs? And all together with other students
- 4) How do you plan your instruction? Consider what is most important in the planning of your lessons. What do you take into account when you are planning?
- 5) Rwanda Education Board and Ministry of Education want educators to think that they have a crucial influence on the instruction and the growth of their children. But there are others, who are part of that as well thinking about parents, people in the community, and maybe children with disability or with special educational needs (SEN) have therapists coming regularly at school as well. Then, how do you communicate and work cooperatively with your colleagues, parents, and other stakeholders who have a genuine interest in students?
- 6) How do you meet the educational needs and interests of your students? and thinking about students with SEN, so how do you keep them engaged, motivated, and excited about learning activities? How do you manage that?
- 7) How do you develop the instructional goal for your lesson?
- 8) How do you assess the students (with and without disability) to know that they have met the instructional goal?
- 9) Is there any information that you gather on going to periodically or while the lesson's still going to assess the students? If yes, can you perhaps give examples of how you use that information?
- 10) Based on the questions I asked you in this interview and your responses, identify the area or skills that you feel, could be strengthened, or developed. Can you perhaps give me examples?
- 11) Identify supports needed to strengthen your competencies or to develop more competencies.
- 12) Is there anything about your schools or anything about students in the classrooms that you would like me to know?
- 13) If I have any further questions later, may I come back to you?

Appendix C. Screenshot of NVivo file

The screenshot displays the NVivo 12 Pro software interface. The main window is titled 'Analysis.mvp - NVivo 12 Pro'. The interface is divided into several sections:

- Top Menu and Toolbar:** Includes 'File', 'Home', 'Import', 'Create', 'Explore', and 'Share' menus. The toolbar contains icons for 'Cut', 'Copy', 'Paste', 'Merge', 'Properties', 'Open', 'Memo Link', 'Create As Codes', 'Query', 'Visualize', 'Code', 'Auto Code', 'Range Code', 'Uncode', 'Case Classification', 'File Classification', 'Detail View', 'Sort By', 'Undock', 'Navigation View', 'List View', 'Find', and 'Workspace'.
- Left Pane (Nodes):** A tree view showing the project structure. The 'Nodes' section is expanded, showing a list of nodes with columns for 'Name', 'Files', and 'References'.

Name	Files	References
Skills to strengthen	7	16
Challenges	0	0
Inadequate resources and appropriat	7	25
Lack of competence	7	28
Increased workload and classroom siz	7	11
Inadequate of supports	6	6
Discipline and time management	6	12
Inclusion of disabled students in co-c	6	8
Inadequate teacher training	5	7
Communication	3	9
Competences	0	0
Managing of students behavior	7	20
Using multiple teaching strategies	7	16
Establishing environment of rappot wi	7	28
Engaging students in Learning	7	31
Design and use assessment in teachin	7	21
Application of discussion techniques and	7	16
Setting instruction goals or outcomes	7	20
Designing coherent instruction	7	15
Collaborating with parents, teachers a	7	48
Recording accurate data	7	21
Knowledge of student	6	19
Managing classroom procedures	5	7
Growth and professional development	5	10
Communicating with students	5	5
- Main Workspace:** Displays the selected node 'Lack of competence'. It shows a list of references with their coverage percentages:
 - Reference 1 - 0.76% Coverage: It is very difficult because talking and using sign language at the same time is very hard and takes time since I don't master sign language. You see I can talk and the time I want to start using sign language it becomes a problem.
 - Reference 2 - 0.43% Coverage: The capacity I have in using the sign language while I am teaching is not enough, I can teach a unit without using sign language
 - Reference 3 - 0.19% Coverage: I don't have even skills in how to manipulate special devices available at school
 - Reference 4 - 0.79% Coverage:my ability in operating special devices is zero' because I am not aware of using any special
- Bottom Taskbar:** Shows the Windows taskbar with the search bar, task view button, and various application icons. The system tray on the right shows the date and time: 13:05, 25/04/2021.