JYVÄSKYLÄ STUDIES IN EDUCATION, PSYCHOLOGY AND SOCIAL RESEARCH
611

Said Juma

Developing Inclusive Education Policy and Practice in Zanzibar

Collaborative Action Research

JYVÄSKYLÄN YLIOPISTO

JYVÄSKYLÄ STUDIES IN EDUCATION, PSYCHOLOGY AND SOCIAL RESEARCH 611

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Esitetään Jyväskylän yliopiston kasvatustieteiden ja psykologian tiedekunnan suostumuksella julkisesti tarkastettavaksi yliopiston Ruusupuisto-rakennuksen Helena-salissa (RUU D104) toukokuun 12. päivänä 2018 kello 12.

Academic dissertation to be publicly discussed, by permission of the Faculty of Education and Psychology of the University of Jyväskylä, in building Ruusupuisto, auditorium Helena (RUU D104), on May 12, 2018 at 12 o'clock noon.

JYVÄSKYLÄ 2018

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JYVÄSKYLÄ 2018

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Publishing Unit, University Library of Jyväskylä

Cover photo by Said Juma.

Permanent link to this publication: http://urn.fi/URN:ISBN:978-951-39-7424-4

URN:ISBN:978-951-39-7424-4
ISBN 978-951-39-7424-4 (PDF)

ISBN 978-951-39-7423-7 (nid.)
ISSN 0075-4625

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Jyväskylä University Printing House, Jyväskylä 2018

ABSTRACT

Juma, Said
Developing inclusive education policy and practice in Zanzibar. Collaborative action research.
Jyväskylä: University of Jyväskylä, 2018. 113 p.
(Jyväskylä Studies in Education, Psychology and Social Research
ISSN 0075-4625; 611)
ISBN 978-951-39-7423-7 (nid.)
ISBN 978-951-39-7424-4 (PDF)

This doctoral dissertation, which consists of three interrelated sub-studies and an overarching summary, explores the inclusive education development process in Zanzibar, Tanzania. The purpose of the research is to contribute to the development of inclusive policies and practices in order to increase the presence, participation and achievement of all learners.

The overarching research question investigated in this research was as follows: How is inclusive education developed in Zanzibar, and how can it be better integrated into the education system? This question was divided into six sub-questions. Each of the three interrelated sub-studies in this dissertation focused on specific sub-questions.

The data included several documents related to inclusive education development; interviews conducted with 20 teachers from two primary schools; these teachers' reflective diaries, which were kept during their action research projects, and the researcher's reflective diary. The data were analysed using qualitative content analysis and thematic analysis.

The findings revealed that Zanzibar has taken several measures to make its education system more inclusive. These measures include acknowledging inclusive education in its 2006 education policy, drafting an inclusive education policy, introducing a re-entry policy for school girls who become pregnant, increasing the number of years of compulsory education from 10 to 12, removing school fees for both primary and secondary schools, providing in-service teacher training for inclusive education, recruiting inclusive education and life skills advisors and resource teachers, and introducing inclusive education courses in teacher training colleges.

It is also worth noting that the teachers in this research experienced collaborative action research as valuable in developing their inclusive practices, despite the challenges they encounter in the course of conducting their projects. Despite its advantages, collaborative action research demands additional time from the teachers beyond their teaching responsibilities. The research participants found the teacher resource centres to be key in enhancing their professional development.

This research shows the need to review the teaching methods and materials used in schools. Reforms in teacher education curricula are also needed in response to increasingly diverse learning needs and educational changes. In addition, this research emphasises the integration of inclusive education and collaborative action research into teacher education so that all teachers can teach inclusively. Both school-based organisational learning and school–community and school–university collaborations can foster collaborative school cultures and inclusive teacher education.

Keywords: inclusive education, collaborative action research, teachers, inclusive teacher education, professional development, social constructivism, scaffolding, Zanzibar, sub-Saharan Africa.

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TIIVISTELMÄ

Juma, Said
Inklusiivisen koulutuksen kehittäminen Sansibarissa: toimintatutkimus.
Jyväskylä: University of Jyväskylä, 2018. 113 p.
(Jyväskylä Studies in Education, Psychology and Social Research
ISSN 0075-4625; 611)
ISBN 978-951-39-7423-7 (nid.)
ISBN 978-951-39-7424-4 (PDF)

Väitöskirja koostuu kolmesta toisiinsa liittyvästä osatutkimuksesta ja niiden yhteenvedosta tarkastellen inklusiivisen koulutuksen kehittämisprosessia Sansibarilla Tansaniassa. Tutkimuksen tarkoituksena on edistää inklusiivisten toimintaperiaatteiden ja käytäntöjen kehittämistä ja sitä kautta lisätä oppijoiden läsnäoloa, osallistumista ja koulusuoriutumista.

Keskeinen tutkimuskysymys oli, kuinka inklusiivista Sansibarin koulutus on ja kuinka inkluusiota voitaisi paremmin edistää sen koulutusjärjestelmässä. Tutkimuskysymys jaettiin kuuteen osakysymykseen, ja kussakin osatutkimuksessa keskityttiin tiettyihin osakysymyksiin.

Tutkimusaineisto koostui inklusiivisen koulutuksen kehittämiseen liittyvistä asiakirjoista, kahden eri alakoulun 20 opettajan haastatteluista, opettajien toimintatutkimusprojektiensa aikana pitämistä refleksiivisistä päiväkirjoista sekä tutkijan refleksiivisestä päiväkirjasta. Aineistoa analysoitiin laadullisella sisällönanalyysillä ja teema-analyysillä.

Tulokset osoittivat, että Sansibarilla on toteutettu useita koulutusjärjestelmän inkluusiota lisääviä toimenpiteitä. Esimerkiksi vuoden 2006 koulutuspolitiikassa inkluusio on jo huomioitu, ja alueelle on hahmoteltu inklusiivinen koulutuspolitiikka. Raskaaksi tulleiden tyttöjen kouluun paluuta helpottamaan on luotu erillinen ohjelma. Oppivelvollisuutta on nostettu 10 vuodesta 12 vuoteen. Vuonna 2015 koulutus muuttui ilmaiseksi 6–12-vuotiaille, ja heinäkuusta 2018 lähtien siitä tulee ilmaista 17 vuoden ikään saakka. Opettajille on kehitetty inkluusiota koskevaa täydennyskoulutusta ja kouluihin on rekrytoitu inklusiivisen koulutuksen ja elämäntaitojen ohjaajia sekä resurssiopettajia. Opettajankoulutuslaitokset ovat myös sisällyttäneet opetukseensa aiheeseen liittyviä kursseja.

Huomionarvoista on myös, että tutkimukseen osallistuneet opettajat kokivat yhteistoiminnallisen toimintatutkimuksen arvokkaana inklusiivisten käytäntöjen kehittämistyökaluna, vaikka projektien käytännön toteutuksessa oli haasteita. Hyödyistään huolimatta yhteistoiminnallinen toimintatutkimus vaatii opettajilta ylimääräistä ajallista panostusta opetustehtävien lisäksi. Osallistujien mielestä opettajien resurssikeskukset olivat olennaisen tärkeitä heidän ammatilliselle kehitykselleen.

Tutkimus toi esille tarpeen tarkistaa koulujen opetusmenetelmiä ja oppimateriaaleja sekä uudistaa opettajankoulutuksen opetussuunnitelmia, jotta voitaisi vastata yhä erilaistuviin oppimistarpeisiin ja koulutuksellisiin muutoksiin. Lisäksi tutkimuksessa painotetaan inkluusion ja yhteistoiminnallisen toimintatutkimuksen sisällyttämistä opettajankoulutukseen, jotta kaikilla opettajilla olisi mahdollisuus opettaa inkluusioperiaatteiden mukaisesti. Sekä koulu oppivana organisaationa että koulujen ja yhteisöjen tai yliopistojen välinen yhteistyö voivat tukea yhteistoiminnallista koulukulttuuria ja inkluusiota edistävää opettajankoulutusta.

Avainsanat: inklusiivinen koulutus, yhteistoiminnallinen toimintatutkimus, opettajat, inkluusiota edistävä opettajankoulutus, ammatillinen kehitys, sosiaalinen konstruktionismi, oppimisen oikea-aikainen tukeminen, Sansibar, Saharan eteläpuolinen Afrikka

ACKNOWLEDGEMENTS

First, I would like to thank the Almighty God, who has enabled me to undertake and accomplish this important research. Second, I would like to extend my sincere gratitude to my supervisors for their guidance and support throughout this research. I must say that I felt very lucky to have Professor Elina Lehtomäki and Adjunct Professor Aimo Naukkarinen as my supervisors. I found both of them very welcoming and always willing to guide and encourage me towards the accomplishment of this arduous work. Professor Elina Lehtomäki, my main supervisor, deserves my sincere and heartfelt gratitude for the care, invaluable support and encouragement she has offered me since I started this journey. Adjunct Professor Aimo Naukkarinen, my second supervisor, deserves special mention for his continuous support and encouragement in the course of this research. I have gained a great deal of scientific knowledge, skills, and values from them. Thanks should also go to Professor Timo Saloviita, a member of the follow-up group, for his expert advice and encouragement, which contributed to the accomplishment of this research. Many thanks should also go to Dr. Satu Perälä-Littunen, the research co-ordinator of the Faculty of Education and Psychology, for her guidance, advice, and support regarding various procedures related to doctoral training and research at the faculty.

I extend my sincere thanks to my colleagues at the Enabling Education Network, particularly Ingrid Lewis, Susie Miles, Anise Walje and Duncan Little. Of particular importance were the monthly online meetings with fellow Enabling Education Network (EENET) members and the inclusive teacher education workshops that Duncan and I facilitated in Zanzibar between July 2015 and April 2018. Equally important were the support and inspiration I received from my colleagues at the Inclusive Education and Life Skills (IELS) Unit (Juma Salim, Mpaji Ali, Hassina Bukheti, and Mohammed Mgeni) throughout this research. In addition, I profited tremendously from the insights into inclusive education I received from the IELS advisors; IELS resource teachers; tutors from the State University of Zanzibar (SUZA), Zanzibar Muslim Academy and the Aga Khan Madrassa Resource Centre and my colleagues from the Teacher Education Department, whom I worked with on various occasions during this research. I also owe thanks to my colleagues at the University of Jyvaskyla for their emotional support and practical advice. They are many in number, but I should mention the following on behalf of the rest: Elisa Heimovaara, Erja Kautto-Knappe, Antti Lehtinen, Anna-Leena Kähkönen and Hanna Posti-Ahokas.

This research would not have been possible without the very close collaboration of the 20 teachers from the two schools during their collaborative action research (CAR) projects. In fact, they were very helpful during the data collection stage, both when they were completing their CAR projects and during the interviews, which were conducted after their CAR cycles. In compliance with the ethical principles of confidentiality and anonymity, these

teachers will remain anonymous in this document. I wish to gratefully acknowledge the generous financial support of the Ministry of Higher Education – Oman through its Oman Academic Fellowship, which sponsored me in undertaking this research for four years. In addition, I am warmly grateful to my employer, the State University of Zanzibar, for granting me a study leave and supporting me in various ways while I accomplished this research.

The University of Jyvaskyla deserves my deepest gratitude and appreciation for offering me an environment conducive to learning, which I needed in order to accomplish this research. I am also grateful to the University of Jyvaskyla for granting me a research grant towards the end of my studies. I would also like to thank the Nordic Africa Institute (Sweden) for offering me a one-month scholarship in February 2017, allowing me to use its library in Uppsala, Sweden, as a guest researcher. I used the library to enrich my literature review. I also wish to express my deepest gratitude to the anonymous reviewers of my article manuscripts, whose valuable comments and constructive critiques helped to shape the manuscripts into a form acceptable for publication in the journals. Likewise, I thank the reviewers of my dissertation, as well as the opponent. Their comments and guidance helped me to make a scientific contribution to the emerging field of inclusive education.

Finally, yet importantly, my sincere thanks should go to my family, especially my parents, Khamis Juma and Asha Ali; my wife, Zaharia Ali, and my children, Mundhir, Ashraf, Zahra, Murshid and Farhana, for their emotional support, tolerance and encouragement throughout this endeavour.

LIST OF ORIGINAL PUBLICATIONS

Juma, S. & Lehtomäki, E. (2016). Moving towards inclusion: How Zanzibar succeeds in transforming its education system? *International Journal of Inclusive Education*, *20* (6), 673—684.

Juma, S., Lehtomäki, E., & Naukkarinen, A. (2017). Scaffolding teachers to foster inclusive pedagogy and presence through collaborative action research. *Educational Action Research*, *25* (5), 720—736.

Juma, S., Lehtomäki, E., & Naukkarinen, A. (2017). Developing inclusive pre-service and in-service teacher education: Insights from Zanzibar primary school teachers *International Journal of Whole Schooling*, *13* (3), 67—87.

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ORIGINAL PAPERS

1 INTRODUCTION

This chapter presents a brief introduction to the present research by describing the motivation for this research, its background, its significance, the research task and questions, and the structure of the dissertation.

1.1 Motivation for the research

All researchers can be serendipitous because they discover valuable or agreeable things that were not being sought. (Akira Suzuki)

Undertaking a PhD research project requires a great deal of inspiration and constant dedication. As a journey, research may involve constant challenges. However, people have various experiences in navigating through the PhD journey. It can be smooth, with minimal challenges, or it can be a truly daunting task. For me, this process was neither especially challenging nor especially smooth. As a matter of fact, I really enjoyed it. To be frank, I did not experience daunting challenges. I never had feelings of regret. At times, I did ask myself again and again why I was performing this research, but this was not because of dismay or despair. Rather, I was trying to better understand what I was doing and its relevance to the field and my society.

Surely, research, especially research that adopts a qualitative approach, is like a journey that a traveler embarks upon without being quite sure where he or she is going to land. As Albert Einstein once said, *'If we knew what it was we were doing, it would not be called research, would it?'* This seems to be the case in my research endeavour. When I first began to shape my ideas about this research journey, in the summer of 2013, I was unsure about what would ultimately develop. One thing was certain though. I had a passionate desire to complete PhD research that was relevant to the field of education based on my prior working experience in this field. In 2014, I was lucky to be one of the State University of Zanzibar (SUZA) staff members who received a four-year sponsorship to pursue postgraduate studies abroad under the Sultan Qaboos

Academic Fellowship (later the Oman Academic Fellowship) offered through SUZA.

As per the university's admission requirements, I had to submit a research study plan. I was of two minds. One potential plan was to investigate the attitudes of teachers regarding the guidance and counselling services provided in Zanzibar schools, and the other potential plan was to investigate the attitudes of primary school teachers towards inclusive education. Because I was ambivalent, I wrote both study plans and sent them to two universities, both in Finland. In autumn of 2013, I received two acceptance letters. I felt fortunate to have two study plans accepted, the former by the University of Kuopio (now the University of Eastern Finland) and the latter by the University of Jyvaskyla (JYU). I then faced the dilemma of deciding which offer to accept before embarking upon the research journey. After several days and nights of intrapersonal discussions, I finally decided to join JYU to undertake inclusive education (IE) research. I later came to realise that I had a great interest in undertaking research on inclusive education development. I first became inspired through my prior experience working as a translator (English-Swahili-English) for an IE project in Zanzibar, which began in 2006. My interest in inclusive education research then increased due to the undergraduate courses I began teaching at SUZA in 2007. I remember that my first involvement with IE came in 2006, when I was a teacher at Lumumba Secondary School. I was hired for two weeks by the Zanzibar Association for People with Developmental Disabilities (ZAPDD) as a language interpreter. I was to work alongside an international evaluator of IE project in Zanzibar. Since then, I have been involved in various consultancies related to IE development in Zanzibar, mostly governed by the Ministry of Education and Vocational Training (MoEVT) through its Inclusive Education and Life Skills Unit and the ZAPDD. Through my involvement in various IE activities in Zanzibar, I gained great insight into and passion for this emerging field. When I joined SUZA in 2007 as an assistant lecturer in the School of Arts, Education and Sciences (now the School of Education), I was asked to teach three courses, namely Principles of Educational Research, Principles of Guidance and Counselling, and Sociology of Education.

In the Principles of Guidance and Counselling course, I attempted to prepare my student teachers to be responsive to the diverse educational, social and vocational needs of their potential students in secondary schools. In Sociology of Education, my focus was on the role of the school as a social organisation and how to create effective school-community relationships, including positive teacher-student and student-student relationships, so that all learners can reach their full potential.

Later, in 2009, I also began teaching another course, one called Social Inclusion and Diversity in Schools. Through the experience and insights I gained from these courses and my involvement in IE activities, I found that there were connections between all four courses and IE. One topic in my Principles of Educational Research course outline was Action Research. In this

course, I attempted to describe teachers acting as researchers and not merely being consumers of research. I taught my students about how teachers can be reflective practitioners by engaging in school-based action research. I later came to discover that all these courses included important elements of the philosophy, principles and practices of IE. This realization contributed to my personal motivation to complete the present research.

One of the readings on action research that greatly inspired me when I was teaching action research at SUZA was Lawrence Stenhouse, especially his inaugural lecture at the University of East Anglia (1979), titled Research as a Basis for Teaching, and his ideas on 'the teacher-as-a researcher'. Stenhouse views classrooms as teachers' laboratories, where students learn and teachers develop their practice through critical and systematic reflection and the testing of innovations. I later discovered the value of action research as a tool that can empower teachers to increase their confidence and problem-solving capacity regarding IE when I met and worked with Ingrid Lewis. I first met her in Zanzibar in November 2013 and learned a great deal of knowledge regarding IE from her when I first had the opportunity to work with her, as her language interpreter and co-facilitator of inclusive education training in Zanzibar. I later worked as her colleague in the Enabling Education Network, a global IE information-sharing network that she leads as a managing director. Susie Miles's previous research and publications on action research in Zambia and Tanzania also piqued my interest in this research. I met her just before I joined JYU in 2014, during my visit to the University of Manchester, UK. I received some new ideas about and insights into action research during our informal conversations in Manchester.

I have also been inspired by the works of Mel Ainscow, Tony Booth, Umesh Sharma, Tim Loreman, Roger Slee, Lani Florian, Chris Forlin and Joseph Kisanji, who have written extensively on IE, and Stephen Kemmis and Robin McTaggart, who are among the gurus of contemporary action research.

For the first few months after I joined JYU and began my PhD studies, I was not sure what kind of dissertation I would write. Thus, I was happy that I had to attend courses and earn at least 60 study credits. I then became inspired to write an article-based dissertation. I decided that I wanted to explore and experience this style of research. However, I could not afford to spend a long time studying, because I was limited by my fixed four-year funding. At times, I would sit down and think that perhaps I had made the wrong decision to undertake an article-based dissertation. I was also worried by the experiences of other students. Specifically, it was taking too long to get their publications through. I began to worry even more after I submitted my first manuscript and began waiting to hear from the editor.

After I finally heard from the editor (six months after the initial submission), the process continued smoothly through three rounds of revision until the manuscript (Sub-study I) was finally published almost 18 months after I began writing it. This gave me new energy and enthusiasm, and I continued to work on the rest of the manuscripts. The process of publishing the second

manuscript (Sub-study II) was somewhat faster as compared to the first one. This time, it took me only six weeks to hear from the editor, who provided positive feedback from the reviewers. After one round of minor revisions, the manuscript was published. My experience with the third article (Sub-study III) was slightly different. The manuscript was rejected in my first two attempts. The first rejection was mostly because of noncompliance with the journal's referencing style (according to the editor), and the second rejection was because of the scope of the journal. After some revisions, the third article finally found a home in another journal. I have learned a great deal from this publishing process. As a novice researcher, accomplishing an article-based dissertation has given me the courage to continue contributing to the IE field through research and publications. I now feel empowered and confident.

Completing a PhD is absolutely a learning process. During this learning process, we are allowed to make mistakes. However, what is important is that we do not simply learn from our mistakes but rather we learn through reflecting on the mistakes and the way we should move forward afterwards. One thing that I struggled with was my ambition to write lengthy manuscripts. The article-based style I had chosen had limitations in terms of the word limits prescribed by specific journals. I always found it difficult to summarise my thoughts to meet the word limit set by the journals. However, managing to express one's ideas succinctly shows professional aptitude.

I was happy that my supervisors did not have a master-apprenticeship approach during the supervision process. They were not only reactive to the work I submitted to them but also were proactive in anticipating and supporting me in acquiring the other skills I needed to develop my agency as a researcher. They would always challenge me to be original in my thinking. They wanted me to take the lead in shaping my research and finding my personal style while they provided a scaffold when necessary. I enjoyed a very peaceful atmosphere during the regular supervisory meetings. Their invaluable professional support and guidance contributed extensively to maintaining my motivation and building a sense of belonging to an academic community in the emerging field of inclusive education. They were not just supervisors but also collaborators in my research project. I am happy now because I feel that through this research, I have contributed to the field. Hopefully, this research can contribute to making a difference in policy and practice in the field of inclusive education, at least in the context of this research.

1.2 Background to the research

'Every child matters and matters equally' (UNESCO, 2017 p. 13).

This message from UNESCO aims to ensure inclusion and equity in and through education. Inclusive education has been widely accepted as an approach to addressing all forms of exclusion and marginalisation in access, participation and learning (Booth, 2003; UNESCO, 2017). It is included in the

2030 Agenda for Sustainable Development, specifically in Sustainable Development Goal (SDG) 4. Various international policies, pieces of legislation, and conventions inform and support the implementation of IE. In 1948, the United Nations adopted the Universal Declaration of Human Rights (UDHR). Article 26 of the UDHR recognises the right to education for everyone:

> Everyone has the right to education. Education shall be free at least in the elementary and fundamental stages. Education shall be directed to the full development of human personality to the strengthening of respect for human rights and fundamental freedoms.

Likewise, the Convention against Discrimination in Education (1960) and the Convention on the Rights of the Child (1989) affirmed the right to education for all children, without any discrimination. Furthermore, the International Convention on the Rights of Persons with Disabilities (CRPD) (2006), the Convention on the Elimination of All Forms of Discrimination against Women (1979), *inter alia*, recognise the right to education for the marginalised groups, including people with disabilities and women. Article 24 of the CRPD directs governments to adopt IE at all levels. Sub-study I of this research project focuses on the Zanzibar Government's efforts to adopt IE. Section 2.4 in this research describes the policy and legislative framework for the development of IE in Zanzibar.

The most significant international declaration in relation to IE was proclaimed at the World Conference on Special Needs Education: Access and Quality, held in Salamanca, Spain, in 1994:

> Schools should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions. This should include disabled and gifted children, street and working children, children from remote or nomadic populations, children from linguistic, ethnic or cultural minorities and children from other disadvantaged or marginalised areas or groups. (Salamanca Framework for Action (UNESCO, 1994, para. 3)

Article 2 of Salamanca Framework for Action (UNESCO, 1994, p. ix) stresses that:

> regular schools with this inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all; moreover, they provide an effective education to the majority of children and improve the efficiency and ultimately the cost-effectiveness of the entire education system.

However, IE is not only about sending all children, including those with disabilities and/or special educational needs to regular schools. Rather, it is about how contexts, attitudes, policies, and practices can be improved to become more inclusive (Slee, 2011). IE, as argued in Sub-study I, is a process, and it is context-related in its execution. It requires holistic and sector-wide approaches to address inclusion and equity and promote lifelong learning opportunities for all (UNESCO, 2017).

Target 4c of SDG 4 recognises pre-service and in-service teacher training and continuous professional development as key to achieving the Education 2030 agenda. Hence, the target envisages all governments designing appropriate strategies to ensure that teachers and educators are adequately prepared, recruited, remunerated, motivated and supported. Supporting teachers and thus making a positive contribution to achieving the Education 2030 agenda are thoroughly discussed in this research.

Although IE is universally accepted as a sound approach to the provision of education, its actual implementation cannot be universal. Such implementation requires localised initiatives that are culturally and socially appropriate (Sharma et al., 2013; Pather, 2008). Mitchell (2005) argues that to effectively implement IE, even though countries can learn from one another, the specific context of each country should be considered.

> Since there is no one model of inclusive education that suits every country's circumstances, caution must be exercised in exporting and importing a particular model. While countries can learn from others' experiences, it is important that they give due consideration to their own social economic-political-cultural-historical singularities. (p. 19)

In the same vein, Hornby (2009) reminds us that the IE models developed in the global North may not be applicable in the global South. Hence, there is a need for a country like Zanzibar to consider a model of IE that is contextually appropriate and culturally responsive when developing strategies for addressing inclusion and equity:

> It is important for developing countries not to attempt to adopt models for inclusive education used in developed countries as these cannot be directly transferred because of political, social and economic differences between developed and developing countries. Instead it is important for the developing countries to consider what stage their education systems are at and also to consider what resources are available, both human and practical, to implement any model of inclusive education. In this way developing countries can design a plan for inclusive education that is suitable for implementation in their own education system. (2012, p. 59).

Previous research (Sharma et al., 2013; Forlin, 2013; Charema, 2010; Croft, 2010) has shown that in implementing IE, developing countries, such as those in sub-Saharan Africa (SSA), face many challenges, including access to schools and resources, negative attitudes towards some learners and poor learning environments. With regard to the implementation of IE, the Incheon Declaration and Framework for Action (2015) envisages teachers and educators who collaborate as key partners in promoting inclusion, quality and equity in education. This is because teachers and educators can 'bring classroom realities to the forefront of policy dialogue, policy-making and planning and provide a bridge between policy and practice, contributing their experiences as practitioners and their collective insights and expertise to overall policies and strategies' (UNESCO, 2015c, p. 26).

Thus, this research addresses, *inter alia*, issues related to the implementation of IE at school and teacher education levels by focusing on policy reforms, practices and the role of teacher collaborative action research (CAR) as a professional development model in promoting inclusion, quality and equity.

1.3 Research task and questions

This research aimed to explore the IE development process in Zanzibar's education system. Specifically, the research project examined how the concept of IE is contextualised and defined in Zanzibar, the introduction of relevant legislation to support IE, how key national and international stakeholders have contributed to the process, how in-service teachers are supported in implementing IE practices in their schools, the role of collaborative action research in developing teachers' capacity for inclusive pedagogical improvement and how pre-service and in-service teacher education could be improved with regard to inclusion.

The overarching question of this research is as follows:
How is inclusive education developed in Zanzibar, and how can it be better integrated into the education system? This question is broken down into six sub-questions:

1. How has inclusive education been introduced to the Zanzibar education system?
2. How have in-service teachers been prepared for inclusion?
3. How does collaborative action research contribute to empowering primary school teachers to make their pedagogy more inclusive?
4. What challenges do primary school teachers face in conducting collaborative action research that fosters inclusion?
5. What do primary school teachers recommend regarding inclusive pre-service teacher education?
6. What do primary school teachers recommend regarding inclusive in-service teacher professional development?

Each of the sub-studies focused on two sub-questions. Sub-study I focused on Questions One and Two, Sub-study II answered Questions Three and Four, and Sub-study III focused on questions Five and Six. The first two sub-questions sought to understand how IE was introduced in Zanzibar, who initiated it, who was involved, what role local and global educational stakeholders played in introducing and developing IE, what structural and policy reforms have been introduced at the ministerial and school levels and what professional pedagogical support do working teachers receive to improve their pedagogical content knowledge and thus best implement IE in their classrooms. Sub-questions Three and Four are devoted to exploring teachers' experiences and the extent to which CAR, as a professional development strategy, is an enabling factor in fostering inclusive pedagogy and solving the inclusion-related

problems facing in-service teachers as they endeavour to promote the presence, participation and achievement of all learners in their schools. Using the insights teachers gained from their CAR experiences, the last two sub-questions primarily address teachers' recommendations regarding the promotion of IE in both pre-service and in-service teacher education.

1.4 Significance of the research

The findings of this research are expected to have direct implications in the context of Zanzibar, Tanzania, and elsewhere in Sub-Saharan Africa (SSA). The research provides informed evidence and insights into the strengths, gaps, tensions and opportunities regarding improving policy, teacher practices and teacher education in relation to IE development. The potential of using CAR for teacher professional development in the context of IE is also an important contribution of this research. By engaging in CAR inquiries, teachers can develop their teacher autonomy, as well as developing their agency as researchers. Additionally, this research contributes to the emerging body of literature in the field of IE in SSA.

1.5 Structure of the dissertation

The dissertation consists of three empirical sub-studies, which have been published in double-blind, peer-reviewed journals, and this overarching summary. It consists of six chapters, a list of references and appendices. In Chapter I, I present the motivation for the research and its background, the research task, the research questions and the significance of the research. In Chapter II, I reflect on the study context and its education system; how teacher education is organized and the historical development of IE in the study context, including the policies and legislation that have supported the development of IE and the roots of IE in SSA. In Chapter III, I describe the major theoretical and conceptual underpinnings of the research. In this chapter, the concepts and theory used in the research at hand are discussed, along with other studies and literature in the field. In Chapter IV, I describe the data, the analyses, action research and how action research has been used in this research. The study participants, sampling procedures and analytical techniques are described. In addition, this chapter provides a methodical reflection. An overview of the sub-studies is provided in Chapter V, and Chapter VI presents a discussion of the research in general and provides the theoretical and practical implications of the research.

2 THE RESEARCH CONTEXT

This chapter outlines the context of the research by presenting a brief description of Zanzibar and its education system, an overview of the teacher education system, the historical development of IE, a policy framework and the roots of IE in SSA.

2.1 Zanzibar and its education system

Zanzibar is an archipelago comprised of two main islands, Unguja (popularly known simply as Zanzibar) and Pemba, as well as a number of adjacent islets in the Indian Ocean off the East African coast. Located about 30 kilometres from the coast of the Tanzania Mainland, Zanzibar consists of a total area of 2,654 square kilometres, of which Unguja, the largest island in the archipelago, covers 1,666 square kilometres (63%). Pemba covers 988 square kilometres (37%). According to the 2012 Population and Housing Census, Zanzibar had 1,303,569 inhabitants, 69% of whom live on Unguja. The others live on Pemba. The population growth rate is 2.8% per annum. The percentage of the population below 15 years of age is 42.5%, which has implications regarding the provision of basic education services and the dependency ratio.

Zanzibar was once a part of Oman (1840-1856) under Seyyid Said ibn Sultan, who moved his capital from Oman to Zanzibar in 1840 (Lofchie, 2015; Sheriff, 2001). From 1890 to 1963, it became a British protectorate, with the sultan as a head of state. On 10 December 1963, it gained independence as a constitutional monarchy (under Jamshid ibn Abdullah) within the Commonwealth of Nations. A coup d'état on 12 January 1964 overthrew the sultanate, and on 26 April 1964, Zanzibar merged with Tanganyika to form the United Republic of Tanzania.

As a semi-autonomous part of Tanzania, Zanzibar has its own executive, judiciary and legislative systems. Its basic education system is somewhat different from that of Mainland Tanzania. Higher education is nonetheless a

Union matter. Other Union matters include foreign policy, defence and internal security and immigration.

The formal education structure (Figure 1) is described in detail in Sub-study II. It consists of two years of pre-primary education, followed by six years of primary schooling, four years of secondary education, two years of advanced secondary education and three or more years of university education.

FIGURE 1 The structure of formal education in Zanzibar: (UNESCO, 2015a).

At the end of Form IV, the students must pass the Certificate of Secondary Education Examination (CSEE), set by the National Examination Council of Tanzania (NECTA), in order to continue on to the A-level secondary cycle. Students who fail the Form IV examinations are either left out of the education system or may carry on in certain vocational training programmes. In addition, some alternative education programmes operate, focusing on the young people

below 21 years of age who have dropped out of the formal education system before completing their compulsory education.

Though there are no formal specialised forms of education, there are nine special units for children with special educational needs that are integrated into eight government schools. Also, two government schools each have one 'special class' for students who are identified as gifted and talented via their primary education examination results. The 2016 education situation analysis (Murphy, Rawle & Ruddle, 2016) estimates about 37,000 children of primary school age (about 15%) to be out of school.

Apart from the formal education system, the majority of children in Zanzibar attend community-owned Qur'an schools (popularly known as madrasas) prior to and alongside their formal schooling. In the madrasas, girls and boys as young as three years old are exposed to early childhood education, focusing on Islamic religious teaching. In addition to the recitation of the Qur'an, children also learn the basic Islamic values and the Arabic language. Though not part of the basic and compulsory education, these schools are very popular and recognised by the Ministry of Education and Vocational Training (MoEVT) through registration. Administratively, these schools are under the Mufti (Supreme Judge of Islamic law) office within the Ministry of Constitution, Law and Good Governance.

2.2 Overview of teacher education in Zanzibar

In this research, the term 'teacher education' has been used to refer to both pre-service teacher training and in-service teacher training and professional development. According to MoEVT (2006), all public (government) teacher training colleges are part of SUZA, which is the sole government university. Hence, pre-service teacher training is offered by SUZA at the diploma level, which lasts from two to three years, and at the undergraduate (bachelor's) level, which lasts three years. In addition to SUZA, a privately owned university named Al-Sumait Memorial University offers several pre-service teacher training programmes at the bachelor's level. As of October 2017, SUZA offers IE as an optional course at the master's level but not at the undergraduate level.

In Zanzibar, in-service teacher training and professional development comes in three forms, namely initial in-service teacher training, in-service upgrading and continuous professional development. To describe these forms more fully, initial in-service teacher training is offered to untrained primary school teachers. A four-year programme is offered through distance learning two days a week (one day during the work week and the other on a weekend). In-service upgrading is provided for qualified teachers through either short or long courses. Finally, continuing professional development is usually offered in the form of workshops and seminars. It is offered at teachers' resource centres and co-ordinated through the National Teachers' Resource Centre.

Teacher education for IE has been provided in the form of in-service professional development by the MoEVT's IELS Unit and other stakeholders. As at October 2016, about 3,700 teachers (less than 30%) from 143 schools (about 17%) have been trained in various issues related to IE. The Zanzibar Association for People with Developmental Disabilities has been working in tandem with the MoEVT to conduct in-service teacher training for inclusion since 2005. These training sessions last between one day and four weeks. Since 2006, the Zanzibar Muslim Academy has been providing a one-year programme called the certificate in inclusive education for in-service teachers (Sub-study III). In addition, since 2015, the MoEVT, through its IELS unit, with support from the Norwegian Association for Persons with Intellectual Disabilities (NFU) and the Norwegian Association of Disabled (NAD), has been conducting in-service professional development for inclusion using the train-the-trainer model. This model can be effective in providing IE training to a large number of teachers (Organisation for Economic Co-operation and Development [OECD] 1999). The trainers include IELS advisors, IELS resource teachers and selected tutors from SUZA, Zanzibar Muslim Academy and Aga Khan Madrassa Resource Centre. In eight pilot schools on both Unguja and Pemba, these trainers use a whole-school approach to train all the staff on various topics regarding IE. It is expected that as of 2018, all these trainers will be engaged in delivering in-service training in the rest of the schools in Zanzibar using an IE teacher training manual developed by the facilitators and trainers. In addition, it is expected the trainers from the teacher training institutions, namely SUZA, Zanzibar Muslim Academy and the Aga Khan Madrassa Resource Centre, will deliver this training in their respective institutions as a stepping stone towards embedding IE throughout pre-service teacher education.

2.3 Historical development of IE in Zanzibar

According to Mapuri (1996) the main motive behind the Zanzibar revolution in 1964 was the socio-economic and political discrimination that existed under the sultanate and British rule. For example, Anangisye and Fussy (2014) claim that colonial education did not aim to provide equal educational opportunities for all. The British rulers of Zanzibar did not consider education to be a basic human right. Its provision based on social stratification. It was racially divisive, with Africans being the most disadvantaged group. The system favoured Europeans and Asians (Mapuri, 1996; Babaci-Whilhite, 2015). In the same vein, Babaci-Whilhite (2015) argues that the 1920 public education plan for Zanzibar excluded the majority of African populations from the public school system. However, Indians and Arabs could attend primary and secondary schools. It was not until 1935 that the British rule allowed Africans in Zanzibar to attend public education, but even this was limited to only four years of primary education (Babaci-Whilhite, 2015).

In July of 1964, six months after the revolution, all schools were nationalized, and, in principle, education was viewed as a human right for all Zanzibaris. This step was followed by the government's proclamation of free education for all on 23 September 1964. Since then, there has been a national celebration on this day in the archipelago each year.

The development of IE in Zanzibar was differed from that in other countries in SSA. Unlike many other countries in the region, Zanzibar did not develop specialised forms of education prior to the official introduction of IE in 2005. However, special education units for learners with disabilities began to be integrated into some regular schools in 1991. Some of the teachers working in the special units have been trained, mostly in Mainland Tanzania and Uganda, while others do not have any formal specialised teacher training. In contrast, some special schools, such as Ikungi (Singida Region), Kabanga (Kigoma Region), and Pongwe (Tanga Region), have existed in Mainland Tanzania since the 1960s, prior to the introduction of IE in the 1990s (Kapinga, 2012).

Although education was technically free for all, the school system in Zanzibar did not, in practice, include all children. For example, girl students who became pregnant were permanently expelled from school. However, the 2006 educational policy reforms have included a re-entry policy whereby schoolgirls who become pregnant may resume their studies after delivery. Sub-study I provides information on the historical development of IE in Zanzibar, including the key actors who led the development of IE, the key educational policy reforms that supported IE and the challenges facing IE implementation in the country.

2.4 Policy framework

This section presents a brief overview of the policy framework for the development of IE in the research context. As discussed in Sub-study I, there are several national policies, plans and strategies that directly or indirectly support the development of IE in Zanzibar. These include Vision 2020 (Zanzibar Permanent Planning Commission, 2011), the Zanzibar Strategy for Growth and Poverty Reduction (ZSGRP III) (Revolutionary Government of Zanzibar, 2016), the Zanzibar Education Development Plan (ZEDP II) (MoEVT, 2017b), the Zanzibar Education Policy (2006) (MoEVT, 2006), the Inclusive Education Policy (draft) (MoEVT, 2017a) and the Zanzibar Vocational Education and Training Policy (2005) (Ministry of Youth, Employment, Women and Children Development, 2005).

Zanzibar's Vision 2020 sets broad goals for guiding educational development. ZSGRP III aims to empower the Zanzibaris by ensuring the provision of inclusive and equitable education and training. The general objective of ZEDP II corresponds to the UN's SDG 4 (UNESCO, 2015c, iii): 'to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all'. ZEDP II employs a sector-wide approach to

implementing educational policy. The Zanzibar education policy reforms of 2006 have supported the development of IE in Zanzibar to an extent. These policy reforms include the extension of compulsory basic education from 10 years to 12 years, making early childhood education a part of basic compulsory education and allowing school girls who become pregnant to continue with their studies. These reforms are critically discussed in Sub-study I. The Vocational Education and Training policy aims to ensure equal access to vocational education and training (VET) to all people, without discrimination. It acknowledges the need to eliminate sex stereotyping in vocational education. Since 2010, the MoEVT has been developing an IE policy. This IE policy (2017 draft) aims to promote equal opportunities for all, leading to access to education, without discrimination. This wide-ranging IE policy also addresses various issues that are critical for IE development, such as gender equity, out-of-school children and the need for collaboration among various educational stakeholders. When endorsed, this policy may greatly contribute to promoting IE in Zanzibar. While some of these policies address the education sector in light of the new global agenda set out in the Incheon Declaration and Education 2030 Framework for Action, the Zanzibar Education Policy and the Zanzibar Vocational Educational and Training Policy do not address the new global agenda. However, as of November 2017, these two policy documents are under review. Sub-study I has also discussed the strengths and gaps of some of these documents in relation to IE development.

Therefore, proper co-ordination and collaboration in implementing these policy documents are critical to the success of IE development. Sub-study I has discussed the need to translate these aspirations into practice by making IE a cross-sectoral issue that is addressed across all relevant government ministries.

2.5 The roots of IE in sub-Saharan Africa

IE is not considered an entirely new concept in SSA, because it has its roots in indigenous African education and the principles of Ubuntu philosophy— 'a concept that represents the core values of African ontology such as: respect for human beings, human dignity, human life, collective sharedness, obedience, humility, solidarity, caring, hospitality, interdependence, and communalism' (Mutswanga & Chataika 2016, p. 128). Likewise, the literature shows that the African philosophy of education emphasises learning by doing, lifelong education, training on the job, learning to live and living to learn (Oduraan, 2000; Adeyemi & Adeyinka, 2003). Although most of the inclusive pedagogical approaches are now viewed as originating from the global North, Kisanji claims that:

> Some of the teaching approaches and methods considered to facilitate effective learning in schools today are the natural part of African indigenous education. Here I have in mind co-operative and collaborative learning and child-to-child learning opportunities. However, due to our veneration of ideas and systems from

> outside, perhaps because of our history, we have all along ignored these practices in our communities, only for research elsewhere to establish their effectiveness (Kisanji, 1999, p.11)

Furthermore, Kisanji (Ibid.) argues that the African traditional values, which are abundant in the oral literature, support social inclusion and inclusive educational practices. He cautions that IE cannot be implemented in the same way across the world. Each society has specific cultural and educational contexts, which should be fully considered to ensure the effective implementation of IE. He further advises developing countries, such as those in SSA, to model their own systems of IE by taking into consideration their own cultural systems. Kisanji's view echoes Hornby's caution and advice:

> It is important for developing countries not to attempt to adopt models for inclusive education used in developed countries, as these cannot be directly transferred because of political, social and economic differences between developed and developing countries. Instead, it is important for developing countries to consider what stage their education systems are at and also to consider what resources are available, both human and practical, to implement any model of inclusive education. In this way, developing countries can design a plan for inclusive education that is suitable for implementation that is suitable in their own education system. (Hornby, 2012, p. 59)

The above caveat is quite relevant to the present study. The development of IE in Zanzibar cannot and should not merely emulate the practices developed elsewhere in the world, without considering the specific socio-cultural, political and economic contexts of Zanzibar. One challenging aspect could be the inclusion of learners with a different sexual orientation (e.g., homosexuality and lesbianism), one that deviates from Zanzibari cultural norms and laws. Also, the mixing of grown-up girls and boys in classrooms or elsewhere, for that matter, is not tolerated within the cultural norms and values of Zanzibar. Thus, separating boys and girls in the classroom is not considered segregation. It does not indicate the inferiority or superiority of one group or the other. Rather, it indicates a distinction that is valued in Zanzibari culture.

Apart from traditional African values, Mbaga (2002) contends that the roots of IE in Tanzania (Zanzibar included) can be traced to Nyerere's philosophy of socialism and self-reliance, which shaped and guided educational legislation and planning in Tanzania. In his philosophy of socialism and self-reliance, Nyerere adopted traditional African principles (Maoulidi, 2010). Nyerere advocated for mutual love, mutual respect and using education to liberate all people in society from hunger, ignorance and diseases (Ibid). Education for self-reliance aimed at making all learners actively participate in the learning process and have meaningful learning experiences that would enable them to be independent. This idea is connected to IE's aim of increasing the presence, participation and achievement (social and academic) of all learners (Booth, 2003). Although, in practice, socialism and self-reliance are no longer a part of the development vision of the Tanzanian government, the basic tenets of mutual respect, unity and love among all people are still relevant because these tenets were based on the people's traditions.

However, given the current socio-political and economic changes in many SSA countries, the long-lasting social values and cultural traditions that support inclusive education are weakening. The extended family structure, for example, is becoming weaker and weaker. The raising of a child is no longer the responsibility of the whole community, as once was. People, especially in the urban areas, are becoming more individualistic. Also, the attitudinal barriers facing some people are becoming stronger (Kisanga & Mbonile, 2017). For example, in Tanzania and some other SSA countries, the killing of people with albinism is rampant, and children with albinism and those with other disabilities are not valued as human beings who are worthy of dignity and respect (Brocco, 2016; Kiishweko, 2017; Malto & Mwangoka, 2017). In addition, the tendency to segregate people based on tribe, colour, political affiliation, faith and geographical background is increasing (Ng'atigwa, 2014). Such tendencies may affect negatively the provision of educational equity and inclusion.

3 CONCEPTUAL AND THEORETICAL UNDERPINNINGS

This chapter highlights the main concepts and theory used in this research project. Concepts such as social inclusion, inclusive education, inclusive learning-friendly environments, inclusive pedagogy, co-teaching, differentiated instruction, inclusive teacher education, organisational learning and professional development for inclusion are described. Also, social constructivism, which has greatly informed the theoretical background of this research, is described, together with the related concepts of the zone of proximal development and scaffolding.

3.1 Social inclusion

IE can be viewed as a part of a wider human rights approach to creating inclusive societies, whereby all members in the society are equally accepted, respected and valued by virtue of their being human. Since the Salamanca Statement, in 1994 (UNESCO, 1994), inclusion in the field of education has become a popular buzzword, one that has increasingly gained currency in both the Global North and South.

My experience and insights gained through engagement in this research have led me to construe inclusion, in the context of education, as a gradual on-going process of transforming the current educational policies, practices, resources, curricula and teacher education to make them more responsive to the diverse learning needs of all learners. Such an ambitious educational approach requires a concerted effort on the part of various educational stakeholders, such as ministries other than from that responsible for education, parents, teachers, school communities, learners and non-governmental organisations. Booth (2003, p. 2) views inclusion as 'a never-ending process, working towards an ideal when all exclusionary pressures within education and society are removed.' Booth further argues that:

> Inclusion does not just involve a focus on the barriers experienced by learners but is about the development of the detail of the cultures, policies and practices in education systems and educational institutions so that they are responsive to the diversity of learners and value them equally. It is about [changing] curricula and ways of organising learning (p.2).

Also, Booth, Nes, and Strømstad (2003) advocate for a transformative view of inclusion, rather than what they call an assimilationist or melting pot view of inclusion, in which learners of diverse backgrounds and (dis)abilities are educated together with little or no change in the curricula or teachers' pedagogical practices.

UNESCO (2001 p. 25), in the Open File of Inclusive Education, cautions that:

> ''The move to more inclusive education does not happen overnight. It requires a process of on-going change based on a clearly-articulated set of principles and should be seen in terms of a system-wide development.''

An inclusive school is viewed as one that is on the move and not at a destination because inclusion is a never-ending process of improving the quality of education and increasing access, participation and achievement among all learners (UNESCO, 2005). Inclusion views education as broader than schooling. Thus, schools are expected to support education in local communities and not be viewed as the sole source of education in society (Kisanji, 1999; Stubbs, 2008). Hence, IE can help advocate for social inclusion and respect for human rights (Stubbs, 2008).

3.1.1 Inclusive education

The definition of IE remains a contentious issue. The literature on IE research indicates the lack of an agreed-upon conceptualisation (e.g., Goransson & Nilholm, 2014; Loreman, Chambers, Sharma & Deepeler, 2014; Slee, 2008; Ainscow, Booth & Dyson, 2006; Artiles, Kozleski, Dorn, & Christensen, 2006).

Ainscow, Booth and Dyson (2006 p.15) suggest that inclusion in education should be understood in relation to (i) students with disabilities or special educational needs, (ii) response to disciplinary exclusion, (iii) all groups seen as being vulnerable to exclusion, (iv) developing school for all, (v) education for all and (vi) a principled approach to education and society. Similarly, in their critical review of research on IE, Goransson and Nilholm (2014) found that often, IE is understood in terms of (i) the placement of pupils with disabilities, (ii) meeting the social/academic needs of pupils with disabilities, (iii) meeting the social/academic needs of all students and (iv) creating communities. Inclusive education is also considered 'a non-categorical, all-embracing approach characterised by ensuring a basic minimum standard of education for all' (Ainscow 2012, p. 290).

This research is informed by the literature, which describes IE as a process of improving educational provisions for all learners. UNESCO (2005, p.13) describes IE as:

> a process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities, and reducing exclusion within and from education. It involves changes and modifications in content, approaches, structures and strategies, with a common vision which covers all children of the appropriate age range and a conviction that it is the responsibility of the state to educate all children.

Booth and Ainscow (2002) view IE as a continuous process of investigating, identifying, reducing and removing barriers to presence, learning and participation. Inclusive education is also broadly viewed as a process that aims to offer equitable, quality education for all and eliminate all forms of discrimination (UNESCO, 2009).

Thus, these descriptions suggest that IE generally hinges on three factors: (1) the physical presence of all students within the mainstream schooling system; (2) their full and active participation in school life and (3) their achievement of the highest standard that they are capable of via the development of new skills (Ainscow, 2003; UNESCO, 2005). Describing the three concepts of presence, participation and achievement, UNESCO posits that:

> Inclusion is about the presence, participation and achievement of all students. Here 'presence' is concerned with where children are educated, and how reliably and punctually they attend; 'participation' relates to the quality of their experiences whilst they are there and, therefore, must incorporate the views of the learners themselves; and 'achievement' is about the outcomes of learning across the curriculum, not merely test or examination results. (UNESCO, 2005, p. 15)

Presence refers to every learner having access to a local school where all learners are welcomed and fully included, without discrimination. Participation relates to how learners are included in the classroom and how they are engaged and supported in creating meaningful learning experiences through active involvement in the classroom and school activities. Achievement is about meeting the learning outcomes across the curriculum by recognising and meeting the needs of all learners. It is crucial that both academic and social achievement are emphasized, rather than placing emphasis on written examinations only. IE requires a holistic approach that involves systemic transformations, reforms and innovations aimed at the improvement of the quality of teaching and learning (Booth, 2011). Echoing Booth et al. (2000), Florian (2009) conceptualises IE in terms of a rights-based process of increasing participation in and decreasing exclusion from the culture, curriculum and community of mainstream schools.

However, it is important to note that school is not the only place where learning takes place, as most of the definitions seem to suggest. Inclusive schooling should not be equated with IE, which is broader than the former.

The European Agency for Development in Special Needs Education (2012) emphasises every learner's potential to learn and the fact that all learners require support. Loreman (2014) argues that for schools to be inclusive, they must have a zero-rejection policy, accepting all learners in their neighbourhoods. However, accepting all children into school is not enough. Of

equal importance are that all learners feel welcome in the school and the school, in general, embraces and celebrates diversity.

The European Agency for Development in Special Needs Education (2012) identifies four key values needed for IE: (1) valuing learner diversity – learner difference is considered a resource and an asset to education, (2) supporting all learners – teachers have high expectations for all learners' achievements, (3) working with others – collaboration and teamwork are essential approaches for all teachers and (4) continuing personal professional development – teaching is a learning activity, and teachers take responsibility for their own lifelong learning. These core values are relevant and adaptable to the context of this research. The first two values are discussed in Sub-study II, and the last two are discussed in Sub-studies II and III.

Previous research has shown that IE requires the improvement of attitudes towards all learners (Sharma, 2010). Improving attitudes towards all learners involves, *inter alia*, moving away from a medical model of disability and learning difficulties that concentrates solely on learners' impairments and learning difficulties. Similarly, focusing on changing the education system without considering individual learning and participation needs will not result in meaningful inclusion. Thus, IE takes a twin-track approach by combining the advantages from both approaches (EENET, 2013). It calls for simultaneously providing the support and resources needed by children who are at risk of exclusion from and within the education system and advocating for systemic changes to overcome barriers to learning and participation and ensure the provision of inclusive and equitable education for all learners. This metaphor of twin-track is adopted from trains, which move smoothly on both tracks but roughly if one track is broken (Stubbs, 2008). The two-track approach seems to fit the context of this research. Learners who are at the risk of exclusion due to poverty, disability, learning difficulties or behavioural problems require appropriate learning materials and teachers who are pedagogically capable of supporting their individual learning needs. At the same time, concerted efforts are needed to transform the entire education system and community, making them inclusive and supportive of all learners. Often, in resource-constrained countries such as those in SSA, resources are either unavailable or in short supply. To obtain these resources, a collaborative approach and the proper co-ordination of various stakeholders are needed. Various stakeholders in the government and the public sector can be taken on board the process of IE development. This necessitates robust IE policy development and effective practices in the implementation of this policy among educational stakeholders.

3.1.2 Inclusive, learning-friendly environment

The aim of inclusive learning is to move beyond simply focusing on access to understanding ways of increasing active participation and engagement in learning. Achieving the optimum level of participation for all girls and boys and introducing gender-sensitive and learner-centred approaches to suit

diverse learning styles have implications for how schools are organised, such as the need for curriculum changes; teaching, learning and assessment adjustments and a shift in the emphasis of school leadership. Inclusive learning moves beyond providing individuals with support to making fundamental changes in the way teaching and learning are organised.

Inclusive learning can be seen as 'a principled approach to education' (Ainscow & Miles, 2008 p. 5), which involves the following:

- the process of increasing the participation of students in and reducing their exclusion from the curricula, cultures and communities of local schools
- restructuring the cultures, policies and practices of schools so that they respond to the diversity of students in their locality
- the presence, participation and achievement of all students who are vulnerable to exclusionary pressures, not only those with impairments or those who are categorised as having 'special educational needs'

The Salamanca Statement and Framework for Action (UNESCO, 1994) called for a broad approach to the inclusion of all children in education and emphasised that inclusive learning is the most effective means of tackling exclusion and building inclusive societies.

Ensuring that all children have access to schools (presence) may not guarantee that they are all learning. Even when all children can regularly attend school, there may be some who are still excluded from participating and learning in the classroom for a number of reasons, such as the use of an unfamiliar language of instruction, the use of corporal punishment, poor teaching methods, the fear of labelling and a lack of basic resources, such as textbooks and exercise books. Thus, creating an inclusive, learning-friendly environment (UNESCO, 2015b) is an essential step in realising inclusive and equitable quality education. According to UNESCO (2015b, p. 6), an inclusive, learning-friendly environment

> welcomes, nurtures, and educates all children regardless of their gender, physical, intellectual, social, emotional, linguistic, or other characteristics. They may be disabled or gifted children, street or working children, children of remote or nomadic peoples, children from linguistic, ethnic or cultural minorities, children affected by HIV/AIDS, or children from other disadvantaged or marginalized areas or groups.

An inclusive, learning-friendly environment is not only child-friendly but also teacher-friendly. It places learners at the centre of learning and encourages their active participation (UNESCO, 2015b, p. 4). Furthermore, UNESCO (2015b p.1) describes an inclusive, learning-friendly environment as (1) proactively inclusive, seeking out and enabling the participation of all children, especially those who are different ethnically, culturally, linguistically, socio-economically and in terms of ability; (2) academically effective and relevant to children's needs for life and livelihood knowledge and skills; (3) healthy and safe for and protective of children's emotional, psychological and physical well-being; (4)

gender-responsive in creating environments and capacities fostering equality; and (5) actively engaged with student, family and community participation in all aspects of school policy, management and support for children.

Although it is beyond the purpose of this research, one important question to consider in the process of developing IE in schools is how to improve the learning environment so as to make it more inclusive and in line with this UNESCO framework.

3.2 Inclusive pedagogy

The concept of inclusive pedagogy seems to be an elusive and complex one. It includes beliefs and conceptions about inclusive teaching and learning. However, there is still a debate among scholars (e.g., Florian, 2010) regarding whether there is a pedagogy that is purely inclusive. To Makoelle (2014b), it refers to the totality of teaching methods, approaches, forms and principles that enhance learner participation. According to Croft (2010, p. 28), 'Inclusive pedagogy […] accepts that learners have individual differences but sees pedagogically significant differences as located in the interaction between the learner and the school and therefore within the teacher's influence and responsibility.' Inclusive pedagogy has also been discussed by Florian and Black-Hawkins (2011) and Black-Hawkins and Florian (2012). Also, Black-Hawkins (2017, p.13) views inclusive pedagogy as:

> A fundamental shift in teachers' pedagogical thinking *away* from a traditional, or individualised approach to learner diversity that starts by making provision for *most* learners, and then offers something additional or different for *some* learners identified as having particular needs, and *towards* a pedagogical approach that starts with the learning of *everybody*. [Emphasis original]

Black-Hawkins's interpretation of inclusive pedagogy echoes that of Rouse and Florian (2012), who perceive it as essentially an approach focusing on what all learners need to know and the skills that all learners need to develop and demonstrate in their learning:

> An approach to teaching and learning that represents a shift in thinking about teaching and learning from that which works for most learners along with something 'different or additional' for those who experience difficulties, to an approach to teaching and learning that involves the creation of a rich learning environment characterised by lessons and learning opportunities that are sufficiently made available to everyone so that all are able to participate in classroom life [Emphasis original] (p.18)

Corbett (2001) asserts that pedagogy is central in debates on inclusion. Loreman (2010) has argued that it is not whether IE is possible but how to make it a reality and what pedagogical practices can best ensure its success (Westbrook et al., 2013) that are important now. In investigating which pedagogical practices can ensure the success of IE, Mitchell (2014) has developed a number of

research-based pedagogical strategies that can help in implementing inclusive practices in the classroom. These strategies include co-teaching, co-operative group teaching, peer tutoring, behavioural approaches and formative assessment and feedback. These pedagogical practices, however, should not be expected to work universally. Rather, their effectiveness is context-bound. Some strategies may work better in one context than in another context. Thus, it can be argued from the present research that more research is needed to determine what works best in the context of SSA and in Tanzania and Zanzibar in particular. Further research in Zanzibar could be directed toward trying strategies that have been found to work in other contexts.

Watkins and Mortimore define pedagogy as 'any conscious activity by one person designed to enhance learning in another' (1999, p.3). According to Alexander (2008, p.3), pedagogy can be construed as the act of teaching, together with its attendant discourse of theories, values and evidence. 'It is what one needs to know, and the skills one needs to command, in order to make and justify the many different kinds of decision of which teaching is constituted.' The most prominent and fundamental aspect of pedagogy, Alexander (2015, p.5) argues, is the classroom interaction between the teacher and the students. In a review of pedagogy, curriculum, teaching practices and teacher education in developing countries, Westbrook, Durrani, Brown, Pryor, Boddy and Salvi (2013, p. 2) identify six pedagogic strategies that are essential in improving the teaching-learning process (Figure 2).

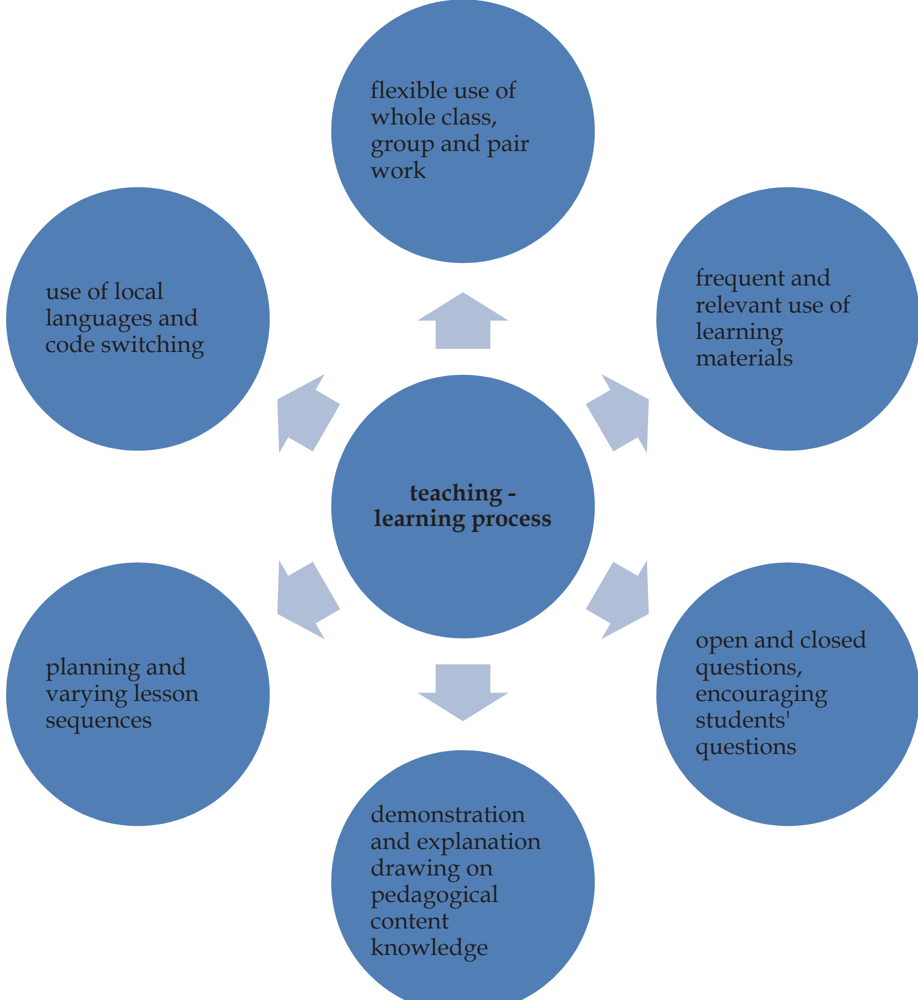

FIGURE 2 Pedagogical approaches (adapted from Westbrook et al., 2013)

These are simply good ordinary practices that can be applied in the classroom to encourage effective teaching. Any teacher training programme is expected to cover this content. The use of these strategies does not require specialised training. Both general education and special education teachers can employ these strategies in their specific contexts. In the SSA context in general and Zanzibar in particular, the use of local languages and code switching, as suggested here, is worth considering. In Zanzibar, for example, the use of Kiswahili, which is the mother tongue of virtually all teachers and students, is of paramount importance for both teachers and students, as discussed in Sub-study I. In the context of Zanzibar, the use of code switching can presumably be useful in including all students because the official language of instruction from Standard [Grade] five onwards is not Kiswahili but English, which may exclude not only students but also teachers who are not competent in the English

language (see also the discussion section in Sub-study III). By using code switching, both teachers and students can create meaningful teaching and learning experiences. However, it should be noted that the success of these strategies largely depends on the extent to which teachers positively utilise students' experiences and create enabling learning environments and sustained support for all students.

In order to create meaningful learning experiences, Corbett (2001) and Corbett and Norwich (1999) contend that inclusive pedagogy should connect the individual learner's learning style with the curriculum and wider school community. Of critical importance for Corbett (2001) is what she calls a connected pedagogy, which fosters positive self-concepts and self-esteem among learners, a central issue in inclusive learning. As O'Brien (2000 p.5) maintains: 'Inclusive learning is grounded in who you are as a person, your sense of worth and the contribution that you can make to the community now and in the future. It is also grounded in how you learn.'

However, in light of the present research, it can be argued that inclusive pedagogy should not be detached from the context and realities of the classroom and the learners' culture. Teachers need to ensure that the learners' cultural values are respected in the learning process (Gay, 2013). Teachers should not simply impose practices that are not responsive to the learners' culture. Thus, I would argue based on the insights gained from the present research that classroom pedagogy should be connected to the learners' culture and learning profile (Nketsia, Juma, Malle, Pirttimaa, & Lehtomäki, 2017).

3.2.1 Co-teaching

Co-teaching constitutes an inclusive pedagogy, which is highly recommended in inclusive settings (Mitchell, 2014; Cramer, Liston, Nevin, & Thousand, 2010; Hornby, 2014). Friend and Cook (2000) differentiate between six co-teaching approaches:

1. One Teacher, One Observer: one teacher takes the responsibility of delivering a lesson, and the other observes and takes notes as the lesson continues.
2. One Teacher, One Assistant: one teacher has a primary responsibility for teaching, while the other professional provides assistance to students as needed.
3. Parallel Teaching: both teachers cover the same information, but they divide the class into two groups and teach simultaneously.
4. Station Teaching: teachers divide the content and the students. Each teacher then teaches the content to one group and subsequently repeats the instruction for the other group.
5. Alternative Teaching: one teacher takes responsibility for a large group, while the other works with a smaller group.
6. Team Teaching: both teachers deliver the same instruction at the same time.

Research has established promising results when co-teaching is used in inclusive settings. Mnyanyi (2014) reported positive results after using co-teaching in inclusive settings in Tanzanian schools. General education teachers worked comfortably with special education teachers to co-teach in inclusive classrooms, despite some minor challenges. Co-teaching can also help in advancing teachers' professional development (Pancsofar & Petroff, 2016).

On the other hand, research has indicated that in some cases, teachers can be uncomfortable engaging with co-teaching because it is time-consuming or simply because of discomfort between some teachers (Rytivaara, 2012; Saloviita &Takala, 2010). In some cases, teachers may need to be shown how to co-teach in order to be convinced of its usefulness. Co-teaching practices are rare among Zanzibar schoolteachers. However, according to the guidelines of the teacher resource centres (TRCs), advisors and resource teachers should encourage the use of co-teaching when they meet teachers for in-service professional development, either in their cluster schools or TRCs (National Teachers' Resource Centre, 1999). This implies that if teachers are not shown how to co-teach, they will not be motivated to do so in their classrooms. Reluctance to engage in collaborative teaching styles such as co-teaching has been discussed in the present research (Sub-study II). That sub-study found that this reluctance may be attributed to a lack of exposure, mentoring and modelling regarding how to do so. This research has therefore highlighted the need to gradually expose teachers to these inclusive pedagogical practices, including co-teaching, so that they can be more reflective and inclusive in their teaching methods (Sub-study II).

3.2.2 Differentiated instruction

Another widely recommended inclusive approach is to differentiate instruction to accommodate the diverse population of learners in the classroom so that all learners, including learners with disabilities or learning difficulties and those who are talented and gifted, can meaningfully participate in the learning process. Hall (2002) describes differentiated instruction as a process of teaching and learning in a mixed-ability classroom. The focus is optimising each learner's growth and to help him or her reach his or her full potential.

Tomlinson (2013) defines differentiated instruction as 'an instructional model that provides guidance for teachers in addressing student differences in readiness, interest, and learning profile with the goal of maximizing the capacity of each learner' (p. 287). Tomlinson (2003) further suggests that differentiated instruction focuses on the learner, the environment and the way in which teaching takes place. Regarding how differentiated instruction works, Tomlinson (2013) identifies four key elements: firstly, the appropriate studying of and responses to learner diversity; secondly, instruction that is guided by community, a quality curriculum and the continuous assessment of learners; thirdly, flexibility and the provision of meaningful learning tasks and, lastly, the modification of learning tasks according to the learning environment and learners' readiness, interest, and learning needs. On the other hand, Thousand,

Villa and Nevin (2007) identify two approaches to differentiated instruction: (1) retrofitting and (2) universal design for learning. In the former approach, the teacher attempts to differentiate instruction after observing that some learners do not fit into the instructional methods used previously. In the latter, the teacher creates differentiated learning experiences beforehand, which will reduce the need for adaptation for certain learners (Thousand, Villa & Nevin, 2007; Rose & Meyer, 2002). Addressing the benefits of differentiated instruction for student learning, Lawrence-Brown (2004) points out that differentiated instruction enables students with a wide range of abilities—from gifted students to those with mild or even severe disabilities—to receive appropriate education in inclusive classrooms.

Differentiated instruction can be linked to Vygotsky's socio-cultural theory and Gardner's multiple intelligence theory (Thakur, 2014). Vygotsky's theory (as discussed in Sub-study II) emphasises the differentiation of learning tasks according to the level of the learners, that is, in terms of what they can learn with assistance (level of actual development) and what they can learn independently (level of potential development). Gardner (1983) posits that there are eight types of intelligence: visual-spatial, verbal-linguistic, musical, logical-mathematical, bodily kinaesthetic, interpersonal, intrapersonal and naturalistic. Gardner also discusses the possibility of a ninth type called existential or spiritual intelligence (Gardner, 1999; Sinetar, 2000). He further suggests that human beings have a combination of these intelligences (rather than a unitary intelligence that can be measured by intelligence quotient [IQ] tests) and that some of these intelligences can develop more highly among certain individuals as compared to others. In addition, these intelligences can change over time. In a differentiated classroom, therefore, teachers try to not only nurture the stronger intelligences but also provide opportunities for learners to use and develop their weaker intelligences.

Because individuals differ in their intellectual profiles, this variance necessitates differentiated teaching techniques in the classroom (Barrington, 2004). Barrington (2004) further argues that Gardner's theory constitutes an inclusive pedagogy because 'it takes a very wide view of intelligence and works towards teaching and assessing students using more than just two of the intelligences. This allows students to use their own strengths and not be marginalized by having to focus on traditional ways of learning' (p. 423). Multiple intelligence theory criticises what Gardner (1993 p.12) has referred to as the 'westist', 'bestist' and 'testist' approach. 'Westist' refers to the tendency to give priority to educational approaches from western countries over others. By 'bestist', Gardner refers to a belief that a solution to a problem can only be obtained using a single 'best' approach (usually one derived from the West), and 'testist' refers to focusing only on the intelligences that can be easily tested.

Generally, Gardner's theory helps teachers consider the different ways in which students learn and the range of support they need to create meaningful learning experiences. In the case of learners with learning difficulties, who may need individual education plans, this theory may also help teachers identify

such learners' strengths (Armstrong, 2009). Despite its popularity and usefulness in inclusive settings, Gardner's theory, like any theory, has its limitations. It has also been criticised for lacking empirical support because is not research-based (Lloyd & Hallahan, 2007; Gottfredson, 2004), lacks classroom support and has uncertain practical application in schools (Willingham, 2004). However, there are also studies that have supported the usefulness of Gardner's theory in schools and various educational programmes (Kunkel, 2007). Overall, Gardner's model seems to pair well with inclusive pedagogical approaches because this model may help teachers to motivate learners and thus reveal their positive qualities and capacities in the classroom (Armstrong, 2009). It would be interesting, therefore, to see Gardner's model applied to support inclusive pedagogy, especially in SSA contexts such as Zanzibar. The practical experiences of real-world practitioners in using Gardner's model will help in examining its usefulness in supporting inclusion.

Although the literature shows that inclusive pedagogical approaches, such as those presented in this section, have proved to be effective in some contexts (e.g., Mitchell, 2014), caution should be taken when applying them in other contexts. Despite the fact that differentiated instruction is considered to be effective in inclusive classrooms, Tomlinson (1999, p. 6) offers a caveat: 'For all its promise… effective differentiation is complex to use and thus difficult to promote in schools. Moving toward differentiation is a long-term change process.'

In line with Vygotsky's social constructivist emphasis on culture and context in the construction of reality (see Section 3.4), these methods may need to be adapted to conform to the cultural and educational realities of a specific context. For example, in the context of Zanzibar, it would be naive to think that teachers are not inclusive when boys and girls are separated in terms of classroom seating organisation or during group work and other classroom assignments, especially at the upper primary and secondary levels. Taking into account Zanzibari cultural values and traditions, it is culturally appropriate to separate boys and girls in the classroom in some cases. This does not necessarily mean having single-sex schools. The separation of boys and girls begins in community-owned madrassas, which children attend before entering formal schooling. However, the madrassa teachers do make use of many inclusive approaches, such as peer-tutoring, co-operative group teaching, co-teaching and differentiated instruction in mixed-aged groups. There is, therefore, a definite need for research into a culturally responsive version of inclusion, such as that practiced in the madrassas, which form an essential part of the Zanzibari culture and informal early childhood education system. These madrassas, in the Zanzibar context, are essential in nurturing what Gardner (1999) calls existential or spiritual intelligence. They are also essential in developing early literacy skills, such as reading, counting and writing (in Arabic and Swahili). Culturally responsive inclusive practices should permeate all learning spaces because education does not begin or end within the four walls of a formal classroom.

3.3 Inclusive teacher education and professional development for inclusion

In this research, inclusive teacher education has been used to refer to both pre-service and in-service teacher education, as well as to teacher professional development emphasising the diverse learning needs of all learners and thus the adoption of inclusive pedagogy and other IE principles and practices. Sub-study III, in particular, addresses the need for reforms in teacher education institutions in this research context and elsewhere to help IE principles and practices permeate both pre-service and in-service teacher education programmes.

Describing inclusive teacher education with a focus on pre-service teacher education, Kaplan and Lewis, (2013a) posit that such education is about 'reconceptualising the roles, attitudes and competences of student teachers to prepare them to diversify their teaching methods, to redefine the relationship between teachers and students and to empower teachers as co-developers of curriculum' (p. 6). While many countries in the global South and North have adopted IE policies, teacher education is still lagging behind in responding to the educational reforms based on the principles of inclusion (Armstrong, Armstrong & Spandagou, 2011; Forlin, 2013). Research has shown that teacher education programmes do not address the practical implementation of IE, despite the existence of policies promoting inclusion (Forlin, 2013; Nketsia, Saloviita & Gyimah, 2016). Previous studies have noted the importance of developing inclusive teacher education in promoting inclusion (Ainscow, Booth & Dyson, 2006; Florian & Rouse, 2009; Forlin, 2010). UNESCO (2009) emphasises the need for educational institutions to adapt their approaches to those of IE in order to ensure that teachers in all schools have 'the pedagogical capacities necessary to make diversity work in the classroom and in line with reformed curricula' (p. 17).

Slee (2010) argues that teaching pre-service teachers to identify the broader sources of exclusion and discrimination in society is among the most relevant areas of competence in terms of promoting inclusive teacher education. Likewise, Pantić and Florian (2015) argue for the importance of preparing pre-service teachers to be agents of change for the sake of inclusion and social justice, rather than agents of preserving the status quo of exclusion from and within education. Developing such agency will definitely require collaboration with other agents.

In developing effective inclusive teacher education, as Booth et al. (2003) point out, it is crucial to consider the teacher education curriculum; teacher preparation and support, policy and cultural contexts, as well as barriers to presence, learning and participation. Similarly, Booth, (2011) asserts that putting inclusive values into action in the cultures, policies and practices of teacher training institutions is as important as preparing novice teachers to promote inclusion in schools.

Inclusive teacher education is therefore an essential part of IE development, one whose success depends upon strong synergy and commitment on the part of all stakeholders, including teacher education institutions, teachers, educational policymakers and curriculum developers. Although inclusive national policies are a necessary factor in inclusive education development, they are not sufficient to ensure inclusive practices (Sub-study I). Of equal importance are inclusion-minded reforms in teacher education (Sub-study III) cultures and practices (Booth, Nes & Strømstad, 2003). Thus, as discussed in Sub-study III, teacher training institutions can be more effective in promoting inclusion if they attempt to be quintessentially inclusive by modelling what the dons preach about inclusion.

The concept of professional development (PD) in education is usually associated with the delivery of some kind of in-service training to a group of staff or all staff in order to improve teacher practices (Graham & Scott, 2016). It can be school-based or job-embedded; based on a certain activity, such as a workshop or a seminar, and provided by an employer or a private organisation. It may also include pursuing further studies in one's profession. According to Ousthuizen and Geldenhuys (2015), PD activities can also include peer observation, mentoring, induction for novice teachers, job rotation, teamwork and group work, school visits, school improvement projects, self-study, classroom-based action research, communities of practice, lesson studies, reflective supervision and technical assistance. Professional development is also used to refer to ongoing teacher learning, whereby teachers engage in various learning activities, either individually or in groups, in order to improve their careers. This suggests that there is a relationship between PD and on-going teacher learning. The Northern Territory Teacher Registration Board website (2015) provides the following description of this relationship: 'Professional learning describes the growth in knowledge, skills and attitudes that comes from being engaged in professional development activities, processes and experiences.' Furthermore, teacher professional learning is a continuing process consisting of planned learning activities designed to improve professional knowledge, practice and engagement. Teacher professional learning is more powerful when it is performed collaboratively (Pugach & Blanton, 2009) and associated with the actual need to improve teaching and learning in schools. One of the key issues in Sub-study II was to explore the use of CAR as a PD model in fostering inclusive pedagogy in order to improve teaching and learning.

In a study conducted by Waitoller and Artiles (2016), action research was found to be the most frequent form of PD for inclusion, whereby schoolteachers and university staff worked together in action research projects to improve inclusive practices. The discussion in Sub-study III indicates the need to establish university-school partnerships through CAR to promote IE. Nishimura (2014) identifies three essential themes of teacher PD for inclusion, namely empowerment, engagement and reflection. Well-designed teacher professional development activities empower teachers to create communities of

practice and collaboratively engage in on-going reflection in their work in order to improve their own work and actively support the learning of all students (Nishimura, 2014). In a review of the literature on PD for inclusion, Philpott, Furey and Penney (2010) found six themes that were crucial to PD for inclusion: (1) PD for inclusive policy, (2) PD for diversity, (3) PD to nurture positive attitudes, (4) PD for evidence-based teaching strategies, (5) PD for collaborative teaching, and (6) PD for meaningful teaching. Hence, teacher professional learning enables teachers to learn new strategies for addressing the diverse learning needs of their students and, at the same time, improve their professional practices (McLeskey & Waldron, 2002). Similarly, previous research suggests that effective PD includes (1) knowledge for practice, knowledge in practice and knowledge of practice (Cochran-Smith & Lytle, 1999); (2) reflection in action and reflection on action (Schön, 1983) and (3) content knowledge, pedagogical knowledge, student knowledge, curriculum knowledge, pedagogical content knowledge and context knowledge (Shulman, 1987).

However, developing inclusive teacher education is viewed as a multi-dimensional and complex process. For example, in a study that sought to identify the conditions, processes and activities underpinning effective inclusive teacher education, Robinson (2017, para. 6) concludes that 'inclusive teacher education must adopt a complex, multi-modal, collective, critical-theoretical, socially situated, research-oriented and partnership-oriented pedagogic model if it is to advance.'

Therefore, PD for inclusion requires activities that can enhance not only every student's learning but also teachers' lifelong learning. It is important that the school ethos promotes and supports continuous professional learning for all staff through collective initiatives (Naukkarinen, 2010), such as CAR. By engaging in CAR, the teachers in Sub-studies II and III connected their professional learning with an attempt to improve their inclusive practices and student learning. While Sub-study I touches upon how teachers were prepared for inclusion through in-service PD, Sub-study III highlights the role of teacher resource centres in fostering PD for inclusion among in-service teachers.

3.4 Social constructivism

My goal throughout this research has been to create understanding, knowledge and learning using Vygotsky's social constructivist paradigm, which stresses the role of social interactions in constructing reality. Accordingly, in the present research, I have construed collaboration and support as crucial in developing inclusive practices among both pre-service and in-service teachers. Education is certainly a shared public good that requires systemic endeavour to acquire and use.

Social constructivism has provided the central theoretical background for this research. Its use in this research has been described in Sub-studies II and III.

It was developed in the 1920s by Vygotsky, who rejected Piaget's assumption that learning can be separated from its social context. Vygotsky's theory emphasises that social interactions with one's environment and other people are essential in the construction of knowledge. Social constructivism considers language and culture to be the key frameworks through which human beings understand and communicate reality (Kim, 2001). Vygotsky stresses that learning is a shared social process and that learners require appropriate guidance and support from more competent partner(s) in order to solve problems that they cannot solve alone. Given such timely and appropriate guidance and support, learners progress across their zone of proximal development (ZPD) (Pritchard & Woollard, 2010).

The ZPD is a concept developed by Vygotsky (1986), who classifies learning development into two categories: (1) actual learning development and (2) potential learning development. Vygotsky defines the ZPD as: 'the distance between the actual development level as determined by independent problem solving and the potential development as determined through problem solving under adult guidance or in collaboration with a more capable peer' (Vygotsky, 1978, p. 86). This means that the ZPD concept assumes that the present level or actual development of the learner is enhanced to a higher level of cognition through increased interactions, involvement and collaboration with or direction by a more skilled person (Figure 3).

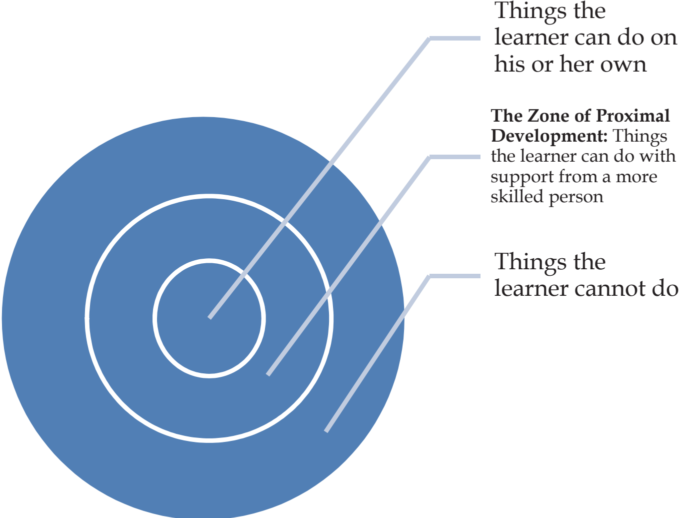

FIGURE 3 Zone of proximal development

Vygotsky's social constructivist perspective constitutes one of the dominant ways of thinking about inclusion today (Gindis, 2003). It should be borne in mind that Vygotsky's paradigm was about special education during his time, but this paradigm could be interpreted as constituting a social model of disability today, which is one of the tenets of IE (Gindis, 2003). His ideas were

influenced by his experiences with institutionalised children with disabilities in Russia. Vygotsky's work on *The Fundamentals of Defectology* (1993) contains many concepts and arguments that have direct links with IE. He argues that a child's disability is a socio-cultural developmental phenomenon. In the Vygotskian approach, the problem of disability is not sensory or neurological impairment but rather social implications and enculturation. Based on the theories of dysontogenesis and child development, Vygotsky developed a paradigm of education for learners with special needs (Stetsenko, 2005), one that applies IE principles. The Vygotskian dysontogenesis perspective rejects the pathological approach (or the medical model of disability), which stresses the child's primary disability and disorders (the biological factors). Rather than belabouring what the child cannot do, dysontogenesis directs focus toward the strengthening of positive capacities and the empowerment of children with disabilities: 'education must cope not so much with these biological factors as with their social consequences'' (Vygotsky, 1993, p. 66).

Social constructivism sees knowledge as socially constructed and learning as essentially a socially mediated and constructed process. According to Vygotsky, effective learning depends upon positive interactions between learners and teachers. He also viewed language and culture as essential elements in determining human intellectual development and perceiving the world.

One of the key principles of social constructivism is that learning is mediated through cultural tools, particularly language, which must be the learner's mother tongue, or first language, and facilitated by drawing on examples or contexts that are familiar to learners in order to prioritise meaningful learning. The importance of using a mother tongue or another familiar language for classroom instruction, as emphasised by Vygotsky, is addressed in this research. One of the issues that is critically addressed in Sub-study I is the use of English as a language of instruction instead of Kiswahili, which is the mother tongue of virtually all learners and teachers in Zanzibar. Among the implications of social constructivism is the need for collaborative methods, such as those emphasised in IE (e.g., co-teaching, peer-tutoring and co-operative learning). The key lessons learned in Sub-study II include the need to foster a collaborative work culture in schools. Research on the link between Vygotsky's social constructivism and the principles of inclusion shows that social constructivism provides a learning and development framework for inclusive learning (Smagorinsky, 2012; Florian, 2007; Dixon & Verenikina, 2007). Florian (2007) further notes that in his early writings, Vygotsky advocated the inclusion of children with disabilities in regular schools to reduce negative attitudes and social isolation.

Although the notion of scaffolding was first proposed by Wood, Bruner and Ross (1976), it is based directly on Vygotsky's ideas on the social context of learning. The concept of scaffolding originates from the field of construction.

Greenfield (1999) argues that a scaffold, as used in construction projects, provides a support, serves as a tool, extends the range of the worker, helps a

worker to perform a task that would be impossible without it and sparingly helps a worker when needed (p. 118). As used in educational settings, the concept of scaffolding is defined by Wood, Bruner and Ross (1976, p. 90) as a process 'that enables a child or novice to solve a task or achieve a goal that would be beyond his unassisted efforts'. In this process, the more skilled person begins by controlling the parts of the task that are initially beyond the learner's capability, allowing the learner to concentrate on and complete those parts of the task that he or she can accomplish without support. In the classroom context, scaffolding refers to the instructional support provided to a learner by a teacher in order to reach a higher level of comprehension and skill acquisition. Graham, Berman and Bellert (2015, p. 70) suggest six scaffolding steps. These steps are summarised in Figure 4.

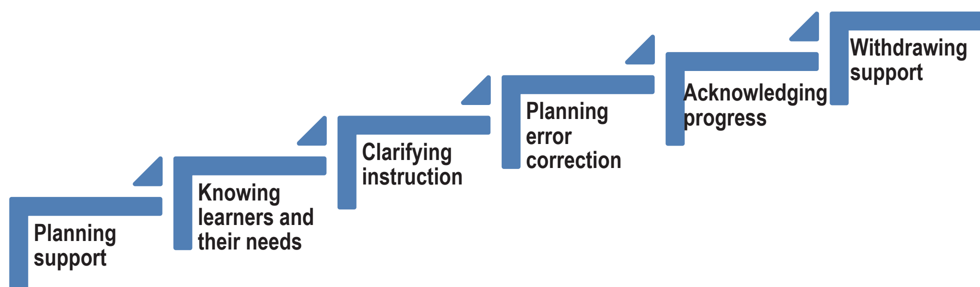

FIGURE 4 Scaffolding steps (adapted from Graham, Berman & Bellert, 2015, p. 70)

As can be seen in Figure 4, scaffolding requires planning and gradually supporting the learner while he or she masters the intended skill or task. In this sense, Benson (1997, p. 126) metaphorically describes scaffolding as 'a bridge used to build upon what students already know to arrive at something they do not know. If scaffolding is properly administered, it will act as an enabler, not as a disabler.' The scaffold that the learners receive should be available for a considerable length of time. If the scaffold is removed too quickly, learning will not occur. Thus, there is a short-term dependence on the skilled person until the learner can accomplish a certain task or master the needed skills.

The main assumption of the scaffolding approach is that when scaffolding is done effectively, it helps the learner to become competent enough to perform the task alone after the scaffold is removed. When the facilitator or the more capable peer provides support for learning, the learners increase their ZPDs and ultimately become capable of performing the task without support.

Although scaffolding in education was originally meant to work for children, research (e.g., Wennergren & Rönnerman 2006) has shown that it may also work in adult learning settings, as discussed in Sub-study II. After working with a critical friend (a research facilitator who helps novice researchers to begin their research projects, advises them how to proceed and promotes learning capacity of teacher researchers through reflective practice skills [Stenhouse 1975]) to learn how to engage in CAR, the teachers in Sub-studies II

and III began to increase their ZPDs in relation to conducting CAR and improving their practices. Introduced by Wood, Bruner and Ross (1976) the metaphor of scaffolding has been used extensively in educational research. It is an attempt to interpret the Vygotskian concept of the Zone of Proximal Development (Wells, 1999). However, its interpretation and use vary significantly from study to study (Hammond, 2002). While most researchers have used the metaphor in relation to the support and guidance provided by adults or more knowledgeable peers to less knowledgeable or less experienced learners (e.g., Stone, 1998), other researchers have extended the interpretation of scaffolding to include the interaction between the more knowledgeable facilitator and a novice in constructing knowledge (Shabani, Khatib & Ebadi, 2010; Lefstein, 2017). The use of scaffolding on teacher professional development for inclusion in my research extends the use of this metaphor in the context of teacher learning and professional development. For example, Horn, Garner, Kane, & Brasel, (2017) and Leifsten (2017) have found scaffolding relevant to teacher professional development activities such as teacher collaborative teams. Although scaffolding is found to be useful in describing the support and guidance that a learner or a novice needs in learning, other researchers have observed a lack of clarity in the use and interpretation of the metaphor (Verinikina, 2003; Brownfield, 2018).

Drawing from the work of Wood et al. (1976), Brownfield (2018) identifies three key elements that underpin scaffolding: (1) intersubjectivity, (2) contingent support, and (3) release of responsibility to the learner. 'Intersubjectivity' refers to a common understanding of the goal of the activity between the more knowledgeable peer and the learner or novice. This can be achieved through making a connection between what is familiar and what is unfamiliar to the learner. The more knowledgeable peer supports the learner by providing prompts, feedback, modelling or by performing some parts of the task. 'Contingent support' means the variation of the level and kind of support given to the learner. The support varies depending on the performance of the learner in a given task or activity (Rogers, 2004). With regards to 'release of responsibility to the learner', as the learner shows a mastery of the skills learned, gradually the more knowledgeable peer withdraws his/her support and lets the learner perform the activity independently with little or no support.

Thus, the use of scaffolding in this research was very much aligned with the three tenets as identified by Brownfield (2018). Figure 3 in Sub-study II shows how the three tenets were achieved. Firstly, I conducted workshops in order to create a common ground between the participating teachers and myself. The teachers and I shared the goal of collaborative action research to promote inclusion in schools and in developing the teachers' capacity of undertaking action research. Secondly, I conducted action research projects with the teachers by providing various levels of assistance. Thirdly, I gradually released my support to the teachers when they conducted action research with limited support from me.

Social constructivism has various implications for this research. First, its emphasis on collaborative learning approaches constitutes most of the inclusive pedagogy discussed in this research (Sub-studies II and III). Second, as stressed in social constructivism, language is significant in understanding and communicating reality within society. One of the key arguments in Sub-studies I and III relates to the role of a familiar language in the construction of knowledge. Third, the concept of the zone of proximal development, which is part of Vygotsky's social constructivism, is appropriate in describing how teachers can benefit from the guidance and assistance (a scaffold) provided by their critical friends while conducting their action research projects (Sub-studies II and III).

In the present research, scaffolding was used in Sub-study II when the researcher offered a scaffold by supporting teachers in conducting collaborative action research in order to improve pupils' presence and foster inclusive pedagogy. The use of scaffolding in this study was meant to help teachers become more confident in identifying and solving problems in their classrooms and schools as they implement IE. Sub-study II's findings have revealed the potential effectiveness of scaffolding among adults, especially teachers. However, scaffolding teachers while they undertake action research requires a more sustained effort than the timeline for this research allows. Still, its introduction and use in the present research establishes its efficacy in the research context. Teachers may need more time and support if they are to successfully apply CAR to the improve presence, participation and achievement of all pupils in their schools.

3.5 Organisational learning in schools

Educational theorists define organisational learning as 'the deliberate use of individual, group, and system learning to embed new thinking and practices that continuously renew and transform the organisation in ways that support shared aims' (Collinson & Cook, 2007, p. 8). Garvin (1993, p. 78) defines a learning organisation as 'an organization skilled at creating, acquiring, and transferring knowledge, and modifying its behavior to reflect new knowledge and insights.' According to the OECD (2016, p. ii), a learning organisation is 'a place where the beliefs, values and norms of employees are brought to bear in support of sustained learning; where a "learning atmosphere", "learning culture" or "learning climate" is nurtured; and where "learning to learn" is essential for everyone involved'. According to Senge (1990, p. 13), many organisations (schools included) face learning disabilities when they fail to adapt to new knowledge and insights. Furthermore, Senge suggests holistic and collaborative approaches to addressing such learning disabilities (see Wallace, 2007, for a discussion of the limits of Senge's use of the learning disabilities metaphor).

Because IE is a relatively new concept to many teachers (most did not learn about IE during their initial teacher training), they must embrace IE principles and practices in their in-service professional learning. This can be more effective if they are backed by a school culture that views the school as a learning organisation. A school, as a learning organisation, must have a supportive working culture and invest time and other resources into quality professional learning opportunities for its entire staff, including teachers, school administrators and support staff (Silins, Zarins & Mulford, 2002). When a school becomes a learning organisation, it ensures that professional learning becomes part of the daily routine in the school by creating, acquiring and transferring new knowledge and insights. Johnston (1998) identified four elements schools need to develop as a learning organisation: an inclusive collaborative culture, an effective means of communication, quality professional development activities, and learning-focused leadership.

In a similar vein, Silins, Zarins and Mulford (2002) found creating a collaborative climate, taking initiatives and risks, improving school performance and supporting professional development to be key factors in fostering organisational learning in schools. This means that although individual learning among the school staff is important, it does not, Collinson and Cook (2007) argue, constitute organisational learning unless it is shared throughout a team or group. Positive relationships and mutual respect between staff and leadership are vitally important in fostering organisational learning in schools. As Johnston (1998) notes, school leadership plays a significant role in organisational learning.

In the context of this research, therefore, organisational learning is viewed as a continuous process of increasing an organisation's capacity to adapt to new environments and innovations through a shared vision, team learning and collaboration among all staff (Senge, 1990; OECD, 2016). Sub-studies II and III address organisational learning as one of the strategies that can help schools and teacher education institutions adapt to IE by promoting professional learning and collaboration in various ways, such as CAR. Thus, through organisational learning, schools and teacher education institutions can increase their capacity to promote inclusion by increasing the presence, participation and achievement of all learners. At the same time, the staff can also improve their careers and contribute to transforming schools and teacher education institutions into learning organisations if favourable conditions exist.

4 DATA, ACTION RESEARCH AND ANALYSES

This chapter describes the data, the use of action research and the data analyses. The purposes, assumptions and role of action research in promoting IE are described. The chapter also provides a brief description of my role in the teachers' action research projects, as well as describing the action research teams and their schools. Furthermore, the role and potential of collaborative action research in supporting inclusive teacher education are described in detail in this section. The chapter also describes qualitative thematic content analysis, which is the primary data analysis method used in this research. The data in sub-study one were analysed by using content analysis.

The data for this research were collected from documents relevant to IE development in the research context (Sub-study I) and from the two action research projects conducted by 20 teachers who worked in two primary schools (Sub-studies II and III). In Sub-study I, the data included policy and legislative documents related to the development of IE in this research context. Most of the documents were obtained as hard copies from the MoEVT's office or as soft copies from the Internet. A search for other relevant literature was performed via several electronic databases, such as ERIC and Psych INF. In addition, the Google and Google Scholar search engines were used to find publications and reports related to IE development, especially in SSA. In sub-studies II and III, CAR was the methodological framework and Thematic analysis was the method of analysis.

During the action research projects, I aimed to support teachers in building their capacity to research their own IE experiences and to work collaboratively to develop more inclusive practices in education. Thus, I attempted to empower the teachers to capture their own pedagogical experiences, identify and address areas that need improvement and hence bring about positive changes regarding the implementation of IE in their schools.

The term 'action research' was coined by German-American social psychologist Kurt Lewin in the 1940s. He is widely considered the founder of the AR field. Other writers who have made significant contributions to the development of action research include Stephen Corey, Lawrence Stenhouse,

Stephen Kemmis, Robin McTaggart and John Elliot. Because AR is conducted by the practitioner, it is often referred to as practitioner-based research. It is also called self-reflective practice because in action research, practitioners' thinking about and reflection upon their work are crucial (McNiff, 2015).

In the 1970s, action research in the field of education gained momentum through the works of Lawrence Stenhouse, who coined the term 'teacher-as-researcher', suggesting that teachers should use their classrooms as laboratories to discover new approaches to improving the teaching and learning process. The present research (Sub-studies II and III) has exposed primary school teachers to the basics of undertaking action research in a school-based context. The findings have shown that teachers are able to launch small-scale research projects in their schools if they are backed by the school leadership. Teachers must be supported to work collaboratively and forge their professional identities as they tackle exclusion. Exclusion, as Slee (2011) comments, is a stubborn foe that may be deeply rooted in a society's culture, including its socio-political culture. To combat exclusion, the individual efforts of teachers are not enough. These teachers must join hands and collaborate.

The practice of action research is also considered emancipatory because it helps practitioners to 'recover, and unshackle themselves from, the constraints of irrational, unproductive, unjust, and unsatisfying social structures which limit their self-development and self-determination' (Atweh, Christensen & Dornan, 1998, p. 24). Thus, action research emancipates teachers from being viewed as objects and consumers of research, allowing them to become active practitioners who perform research on their own practice and create knowledge to improve their practice. One of the self-evident advantages of action research for teachers is the fact that many action research skills are transferable to the classroom and teachers' practice. For instance, while effective planning; data-gathering techniques, such as observation and interviews; data analysis; report writing and reflection are typical of action research, they are also very useful in enriching teachers' pedagogical repertoire.

While McNiff (2002) views action research as a form of on-the- job professional learning, Brydon-Miller, Greenwood and Maguire (2003) consider action research an effective form of continuous learning for teachers: 'Teachers learn best by studying, doing and reflecting, by collaborating with other teachers, by looking closely at students and their work, and by sharing what they see.' A professional teacher should thus never stop learning from his or her work experiences. Teachers should not think that they have finished learning how to teach after completing their teacher training in college. A teacher must constantly update his or her knowledge because knowledge develops day by day. This argument can be better summarised by using the popular Kiswahili sayings *elimu ni bahari* and *elimu haina mwisho*, meaning education/knowledge is [like] the sea, and education has no end, respectively.

Altrichter, Posch and Somekh, (1993, p. 4) summarise the purpose of action research as 'to support teachers, and groups of teachers, in coping with the challenges and problems of practice and carrying through innovations in a

reflective way'. Stringers (2007) views action research as a systematic approach to investigation that enables people to find effective solutions to the problems they confront in their everyday lives. This suggests that action research focuses on specific situations and localised solutions. It involves the creative action of those who are close to the issues being studied in order to create meaningful and sustainable solutions to these issues. In this regard, Stringers further argues that centralised policies and programmes should not mandate specific actions and activities. Rather, such policies and programmes should provide useful resources to enable appropriate and sustainable action that is suitable to a particular place.

Epistemologically, action research views knowledge as context-rich and collaboratively constructed (Whitehead & McNiff, 2006):

- Teachers are the source and agents of educational reform and not the objects of reform.
- Action research empowers teachers to own professional knowledge because teachers—through the process of action inquiry—conceptualize and create knowledge, interact around knowledge, transform knowledge, and apply knowledge.
- Teachers and principals work better to collaboratively address the challenges they have identified themselves in their work environment.

Action research can thus be described as a kind of research conducted *by* the people *for* the people and not merely *on* the people. It is a democratic process of inquiry. Thus, the teachers involved in action research are considered the subjects and not, as they have traditionally been considered, the objects and consumers of research. Stringer (2008, p. 1) notes that action research 'is based on the proposition that generalised solutions may not fit particular contexts or groups of people and that the purpose of inquiry is to find an appropriate solution for the particular dynamics at work in a local situation.' With regard to its scientific status, action research, Elliot (2015) argues, is not lacking in scientific rigour. It involves, like all science, curiosity, honesty, integrity, open-mindedness and a respect for freedom of thought and discussion. To a large extent, action research is based on interpretivist philosophy, rather than positivism.

Therefore, I chose action research as one of the most appropriate approaches to use in supporting teachers who promote inclusion, despite certain challenges that teachers may face during the process. The Inclusive Education Policy draft (MoEVT, 2017) acknowledges the need to empower teachers with action research skills and thus help them identify and overcome barriers to learning in schools and classrooms.

4.1 Collaborative action research

Many terms are associated with action research. Such terms include participatory action research, practitioner research, action science, collaborative

action research, co-operative inquiry, teacher research, appreciative inquiry and community-based participatory research. In this research, I have used the term collaborative action research (CAR) to focus on the collaborative nature of the research. Kemmis and McTaggart (1987, p. 6) argue that collaboration is central to any form of action research when they posit that AR is:

> a form of *collective*, self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social or educational practices, as well as their understanding of these practices and the situations in which these practices are carried out. Groups of participants can be teachers, students, principals, parents and other community members—any group with a shared concern. The approach is only Action Research when it is *collaborative,* though it is important to realize that the Action Research of the group is achieved through the *critically examined action* of the individual group members. [Emphasis original].

Thus, CAR is undertaken by insiders themselves or in collaboration with experts. It is never conducted solely on the community or an organisation without the insiders participating as researchers in the process. Describing the goals and methods of AR, Argyris and Schon (1991, p. 86) add the following:

> Action Research takes its cues—its questions, puzzles, and problems—from the perceptions of the practitioners within particular, local practice contexts. It bounds episodes of research according to the boundaries of the local context. It builds descriptions and theories within the practice context itself, and tests them there through *intervention experiments*—that is, through experiments that bear the double burden of testing hypotheses and effecting some (putatively) desired change in the situations. [Emphasis original]

The findings of Sub-study III show that CAR can help teachers gain significant insights into pupils' learning and engage in teacher professional development. Pre-service teachers who have CAR skills are likely to be capable of objectively evaluating their students' behaviours and helping them accordingly. The findings of sub-studies II and III indicate that when teachers work together to undertake CAR projects in their schools, they can:

- Apply their problem-solving skills to real-life classroom situations.
- Develop teamwork and a collaborative work culture.
- Create useful information for curriculum adaptation, helping serve the learning needs of all students, including the talented and gifted.
- Bridge the gap between theory and practice by directly working on the solutions they proposed in their CAR projects.

CAR provides interactions whereby practitioners collaboratively generate knowledge as a result of their shared planning, acting, observing, reflecting and replanning or a series of self-reflection cycles (Kemmis, McTaggart & Nixon, 2014). Brydon-Miller, Greenwood and Maguire (2003) reflect on the role of action research and contend that collaboration with colleagues through action research leads to both community changes and personal changes. CAR

may also refer to collaboration between teacher practitioners and university researchers (Feldman, 1993). However, the success of such a model depends, according to West (2011), on the willingness of both the practitioner and the researcher to redefine their traditional roles and power structures.

One of the propositions underpinning action research is that generalised solutions are not always applicable in all contexts and that what matters is finding appropriate solutions given the dynamics of particular contexts (Stringer, 2007). Teachers, as practitioners, must be empowered to become creative investigators and facilitators of learning rather than mechanical producers of knowledge. By investigating and reflecting on their own practices, teachers become both producers and consumers of knowledge (Rönnerman, 2006). Thus, the application of contextually relevant practices by creative and resourceful teacher practitioners through action research can yield promising results in terms of reducing and preventing barriers to learning. This result has been observed by teachers in the present research who engaged in CAR projects with my help. I acted as a researcher and a critical friend to the teachers (Sub-studies II and III)

Likewise, Cochran-Smith and Lytle (2001) have categorised the knowledge gained through action research into knowledge-for-practice (constructed by experts through research), knowledge-in-practice (acquired through practical engagement and reflection) and knowledge-of-practice (gained through teachers' engagement in their own classrooms).

In this regard, action research can be, Wennergren and Ronnerman (2010) argue, a significant source of support for teachers while they are gaining knowledge and skills (*knowledge-of-practice)* via their active participation, co-operation and social interaction. As the findings in Sub-study III show, CAR can be a powerful tool to use in bridging the gap between theory and practice when it is introduced to pre-service teachers (Kaplan & Lewis, 2013b). Sub-study II also shows how the teachers found localised solutions to the problems related to their pupils' attendance and the use of inclusive teaching aids.

In the present research context, I have attempted to use CAR to empower teachers to collectively build skills in identifying and solving problems related to inclusion in their schools. Thus, the use of CAR in this research project has contributed to bringing out these teachers' voices, which are rarely heard. Sub-study II aimed to equip teachers with a new practical skill (CAR) that changed their status. It was research in the true sense of not 'mining' participants for information but it also involved 'giving back' to them. The findings of this Sub-study have proved what is possible in resource-poor contexts when the teachers are supported.

My role in the CAR projects was that of a facilitator and critical friend (Booth & Ainscow, 2002). In this role, I introduced the principles and practice of action research, as well as its role in promoting IE, to the 20 selected teachers. At the end of the teachers' CAR projects, I conducted interviews with each of the participating teachers to, first, reflect on the entire process and, second,

garner their insights into CAR's role in promoting inclusion. The guiding questions used in these interviews are appended to this dissertation.

Ten teachers from each school were selected to form action research teams. It was important to ensure that the selection of the CAR projects was not top-down but bottom–up. Thus, I did not influence the choice of the projects. This was not easily understood by the teachers, who worked in the context in which teachers expect to receive directions from those who are of higher authority, such as head teachers, directors, and educational officers.

Both teams were invited to workshops where they received an introduction to action research theory and practice and learned about its role in promoting inclusion. The participants practised what they learned in the workshops by collecting data through observation, interviews and focus group discussions. During the workshops, the members also identified and prioritized barriers to access, participation and achievement among their pupils. Another workshop was held to train the teachers in various methods of documenting their findings (e.g., reflective diaries, diagrams, mind maps, photographs and report writing). All the teachers who participated in the action research projects were primary school teachers (16 females, four males). Their teaching experience varied from two to 20 years.

Both schools (Primary School A and Primary School B) were government primary schools. At Primary School A, the total number of pupils at the time of the research (2014) was 1,659 (832 girls and 827 boys), and there were a total of 53 teachers (48 females and five males). Primary School B had a pupil population of 1,233 (572 girls and 661 boys) and 32 teachers (31 females and one male).

Sub-study II provides a detailed description of the data collection process, the formation of the action research teams, their action research projects, the timelines and the activities involved in the projects. The study participants and their action research projects are described in detail in the appendix III.

4.2 Collaborative action research in teacher professional development

The traditional approach to teacher professional development focuses on seminars, workshops and meetings, as well as focusing more on teaching than on learning. This approach is based on the transmission of knowledge from 'experts' to students. In contrast, CAR adopts a constructivist perspective, assuming that a teacher is not only a consumer but also a constructor of knowledge. With a critical friend as a scaffold, teachers can collaboratively produce knowledge through informed action and critical reflection.

Professional development that is meaningful to teachers is not detached from the realities of classroom practice. Thus, CAR is one such opportunity to help teachers become reflective practitioners with professional autonomy. CAR leads to teacher learning through the sharing of knowledge and problem-

solving about their practice. It enables teachers to shift from traditional teacher training models to a model in which teachers are regularly engaged in reflecting in and on their practice. They learn how to improve their practice and hence improve their pupils' learning (Darling-Hammond & McLaughlin, 1995). Carr and Kemmis (1986, p. 162) contend that:

> Action research is simply a form of self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practices, their understanding of these practices, and situations in which the practices are carried out.

In this research project, Sub-studies II and III show that there is a pressing need for collaboration between teachers and researchers through collaborative action research inquiries. Researchers, especially those in universities' faculties of education, should see teachers as their professional partners and engage in research in order to improve teaching and learning.

The practice of CAR is also considered emancipatory because it helps practitioners to 'recover, and unshackle themselves from, the constraints of irrational, unproductive, unjust, and unsatisfying social structures which limit their self-development and self-determination' (Atweh et al., 1998, p. 24). Thus, AR emancipates teachers from being viewed as objects and consumers of research, transforming them into active practitioners who research their own practice and create knowledge with which to improve their practice. One of the self-evident advantages of action research for teachers is the fact that many of action research skills are transferable to the classroom and teachers' practice. For instance, while effective planning; data gathering techniques, such as observation, interviews, and FGD; data analysis; report writing and reflection are typical of action research, they are also very useful in enriching teachers' pedagogical repertoires. Thus, it is crucial to ponder how schools can become responsive to all learners and transform existing educational systems. As D'Allesio further posits, 'the development of inclusion requires action inside and outside schools' (D'Allesio, 2012, p. 6). Furthermore, Howes et al. (2004) maintain that IE demands self-reflective and critical practices and autonomy on the part of teachers to address the exclusionary factors affecting learning. Research findings indicate that CAR is becoming recognised as a promising and evidence-based approach to promoting teachers' professional development through critical self-reflexivity regarding their practice (Hagevik, Aydeniz & Rowell, 2014). Engaging teachers in evidence-based practices, such as collaborative action research, as discussed in Sub study II, helps these teachers to acquire the necessary skills to respond to the learning needs of all students (Bourke & Loveridge, 2013).

Thus, action research, as Ryan et al. (2017) note, is usually aimed at improving teachers' professional learning and classroom practices. Teachers are constantly engaged in self-reflection about their work and how to improve it. However, McNiff, Lomax and Whitehead (1996, p. 6) argue that what is even more fundamental in AR is translating an idea into action. The authors use the concept of praxis to describe this notion. They describe praxis as 'deliberate,

informed, planned and systematic action, directed towards improvement and implementation of an instructional initiative' (Ibid. p.1). Further, the authors contend that:

> to be action research, there must be praxis rather than practice. Praxis is informed, committed action that gives rise to knowledge rather than just successful action. It is informed because other people's views are taken into account. It is committed and intentional in terms of values that have been examined and can be argued. It leads to knowledge from and about educational practice.

A study conducted in Turkey (Kayaoglu, 2015) found that through AR, teachers are empowered to own their practices more autonomously. That study found that AR contributes significantly to teacher professional development, despite certain challenges that teachers may encounter over the course of the process. Caldehead and Gates (1993) also maintain that among the benefits of action research and reflective practice are teacher empowerment and the improvement of pupil learning.

Sub-studies II and III have critically addressed collaborative action research as a model of teacher professional development, including its pros and cons in terms of promoting inclusive pedagogy among teachers, its role in bridging the gap between theory and practice in the education field and its role in promoting pre-service and in-service teacher education for inclusion.

4.2.1 What did the teachers learn from their CAR projects?

The use of action research for teacher professional development in schools is a new approach in Zanzibari schools. Teachers are unaccustomed to conducting action research. This research has shown that CAR can be a useful tool of promoting teachers collaboration in implementing inclusive education. The research has shown that CAR can have practical implications in solving some of the problems facing teachers in implementing inclusion in their schools.

The teachers' action research projects have helped them in developing their confidence in solving problems related to inclusion. For example, one of the participating teachers acknowledged that:

> 'it [action research] has shown us that we can solve the problems that we previously thought we couldn't solve. Through this [action research] approach we can solve the problems ourselves.' (T2K)

Another teacher commented that through their action research projects they learnt skills for the improvisation of teaching materials:

> 'Frankly speaking, I did not have any skill of making such materials [before this research]. I was simply teaching children with visual impairment in my class but I did not know how to make those [tactile] teaching materials.' (T10A)

The teachers also learned how to keep written records of their progress and results:

> 'We did not document what we were doing, but now we have learnt how to document our progress.' (T2B)

Apart from the problems that the teachers could solve through their CAR projects, they also learned the basics of CAR (Sub-Study II).

4.3 Thematic content analysis

Thematic content analysis is a qualitative analytical method. Braun and Clarke (2006, p. 79) define thematic content analysis as 'a method for identifying, analysing and reporting patterns (themes) within data'. This analytical method can involve various approaches. Hsieh and Shannon (2005), for example, have categorised thematic content analysis in a three-fold manner: (1) Conventional qualitative content analysis, which involves the direct and inductive coding and categorisation of the data. The analysis is completely data-driven, as in grounded theory. (2) Directed content analysis. The researcher is guided by certain *a priori* codes that are informed by the theory or research findings that are relevant to the research questions. Then, the researcher engages with the data and allows the themes to emerge. The researcher searches the entire corpus of the text for both semantic and latent themes (Braun & Clarke 2006). (3) Summative content analysis, in which the researcher begins by counting certain words and then proceeds with the analysis to include covert or hidden meanings and themes to explore the inductive usage of the words in the data. Braun and Clarke's steps are as follows: (1) familiarising oneself with the data, (2) generating the initial codes, (3) searching for themes, (4) reviewing the themes, (5) defining and naming the themes and (6) producing the report. These steps are similar to Hahn's, which are as follows: (1) initial coding, (2) revisiting the initial coding, (3) developing an initial list of categories, (4) modifying the initial list, (5) revising the categories and sub-categories, and (6) moving from categories to concepts. Zhang and Wildemuth (2009) have described the process of qualitative thematic content analysis as consisting of eight steps: preparing the data, defining the unit of analysis, developing categories and a coding scheme, testing the coding scheme on a sample text; coding all the text; assessing the coding consistency; drawing conclusions from the data and reporting the methods and findings.

Although various authors have attempted to describe the steps involved in thematic content analysis, it should be noted that qualitative data analysis tends to be a recursive, rather than a linear, process. The steps typically overlap. Although there is no blueprint for carrying out thematic content analysis, Braun and Clarke (2006) suggest not using the data collection questions as the themes. Thematic content analysis requires the researcher to read and reread the entire dataset to make sense of the data and identify the themes.

In the present research, I used thematic content analysis for the three sub-studies (see appendix VI for a sample of the initial coding of the interview

data). In Sub-study I, it was applied to analyse the contents of the documents. The units of analysis included 'inclusive education', 'education policy', 'legislation for inclusive education' and 'the historical development of inclusive education'. The main issues were identified from the sections. Using a set of themes, each document was classified according to the sub-categories, such as definitions of IE, policies supporting IE, key actors in the development of IE and teacher training for IE. After coding the materials, the themes were developed, and finally, the information was interpreted. In Sub-studies II and III, the data from the interviews were analysed using thematic analysis, which was mainly guided by Braun and Clarke (2006), Bogdan and Biklen (2007) and Saldaña (2016). The details regarding how the analyses were performed are described in each of the three sub-studies.

4.4 Reflections on ethical considerations and trustworthiness

Regarding ethical considerations and integrity in research, several factors must be considered, such as the principles of voluntary participation, informed consent, confidentiality and anonymity, authorship and ownership, protection from harm and respect for the participants (National Advisory Board on Research Ethics, 2009). In this research project, every effort was made to ensure conformity with the standards of responsible conduct in research, especially with regard to the following:

4.4.1 Permission

As per the research regulations of the Zanzibar Government, research permits were obtained from the relevant authorities, and verbal permission was sought from the head teachers of the two schools from which data were collected. A research permit from the Zanzibar Research Committee was also obtained (see appendix V).

4.4.2 Informed consent

According to the National Advisory Board on Research Ethics, Finland (2009), research subjects can provide consent orally or in writing. Alternately, their behaviour can be interpreted as indicating that they have given consent to participate. In this research, I provided information regarding the purpose of collecting the interviews and focus group discussion (FGD) data, as well as the researcher's contact information. Informed consent was obtained both orally and in writing (see appendix I) from the participants, indicating their voluntary participation in the audio recording of the interview/FGD data. I later realised that I did not inform the participants about who else would have access to the data or how data management would be handled, e.g., how I would store the data, how I would maintain confidentiality and what I would do with the data

after the research project. Hence, I corrected this by going back to the participants during the follow-up visits to inform them about data management and how the data would be archived for secondary use.

4.4.3 Confidentiality and anonymity

Doyle (2007, pp. 81-82) describes confidentiality as:

> not having identifying characteristics such as name or description of physical appearance disclosed so that the participants remain unidentifiable to anyone outside the permitted people promised at the time of informed consent. Anonymity is only one aspect of ensuring confidentiality. It involves using a fictional or no name at all rather than the participant's real name.

In this research, the participants were assured of confidentiality and anonymity before collecting their data. To ensure confidentiality, the data have been carefully stored both manually and electronically. Only the researcher and the supervisors have access to the original data, which contain some identifiers of the participants. During the data analysis process, the names of the two schools from which the data were collected, as well as the participants' personal identifiers, were masked. Primary School A and Primary School B were used as pseudonyms for the two schools. To mask the teachers' names, codes, such as T1A, T6B and T8A, have been used in place of the teachers' real names.

4.4.4 Power dynamics

According to Mockler (2014), the issue of power dynamics should be considered when conducting CAR projects. In this research project (Sub-studies II and III), I tried my level best to remain only a facilitator and a critical friend, providing advice and technical support where necessary as the action research teams attempted to improve pupil presence at Primary School A and to make their instructional pedagogies more inclusive at Primary School B. However, because the teachers were not used to conducting action research, I sometimes had to convince them to continue with the spirit they showed during their first action research projects, when I worked closely with them to show them how to do it. It was not always easy, and at times, I felt like I was facing an ethical dilemma, such as when I had to repeatedly encourage them not to abandon their action research despite their tight daily routines at their schools. For action research to become meaningful and sustainable, Banegas (2015) argues, it must be based on honesty, respect for the participants and the participants' interest and willingness to proceed.

In a way, there was a power difference between the teachers and myself while I assumed the role of facilitator and critical friend. This power difference was based on the difference in educational levels and institutional affiliations between the facilitator and the teachers working on the action research teams. Being a doctoral student and an assistant lecturer in a university working with teachers in primary schools may have contributed to the teachers taking me to

be an authority. On the other hand, the power dynamics were mitigated to some extent by the fact that I was close to the teachers in terms of communication because they and I speak the same mother tongue. I tried to be as approachable as I could.

4.4.5 Rigour and trustworthiness

According to Guba (1981) and Lincoln (1985), the trustworthiness of qualitative research should be distinguished from that of quantitative inquiries. Because the research at hand employed qualitative methods, its rigour and trustworthiness are described in terms of Guba's four constructs: (1) conformability (equivalent to objectivity in quantitative inquiries), (2) credibility (internal validity), (3) dependability (reliability) and (4) transferability (generalisability/external validity). Examining strategies to ensure trustworthiness in qualitative research projects, Shenton (2004) provides some suggestions about how to achieve trustworthiness using Guba's criteria. Table 1 summarises Shenton's suggestions and the strategies used in this research.

In this research, I have investigated the perceptual meanings of the research participants. I sought to arrive at an understanding of the primary school teachers' experiences, views and suggestions regarding the development of IE from their own perspectives as practitioners who experience classroom teaching in their daily work routines. I was also interested in their views regarding how teacher education can be inclusive so that all children can experience presence, participation and achievement in learning and reach their full potentials. Approaching the issues from an insider's perspective was important in understanding the teachers' intentions and the motives behind their views and suggestions.

I have employed qualitative thematic content analysis to analyse the interviews with the teachers. In an attempt to gain a deeper understanding of the teachers' experiences, views and suggestions, this kind of analysis was appropriate. The themes emerged from the data, and I then built a theory based on the data. Being a qualitative research project that involves a great deal of interaction with human beings, there is a risk of misunderstanding or misjudging the meanings of the participants. However, to ensure that I minimised such limitations and improved the quality of the results, I did the following:

- Used researcher triangulation (myself and the supervisors) in coding the data to increase the inter-coder reliability
- Listened to the audiotapes and transcriptions of the interviews as many times as possible to increase my familiarity with the data
- Cross-checked the data analysis, especially my interpretation, with the supervisors
- Applied respondent validation (Saldaña, 2016) by contacting some of the teachers by email or phone to confirm certain points that needed clarification

4.4.6 Quality criteria for action research

Heikkinen, Huttunen & Syrjälä (2007) proposed five quality criteria for action research: historical continuity, reflexivity, dialectics, workability, and evocativeness. However, I concur with Feldman (2007), who argues that these five principles of quality for action research are insufficient because they mostly address the quality of the research report and not the quality of the research itself. Thus, Feldman (2007) adds that action research should have a thorough description of the methods of and reasons for data collection and a clear and thorough description of how the action research narratives were constructed from the data. In the present research, I have provided clear descriptions of the participants and their research projects, how the data were collected and the reasons for collecting the data (Sub-studies II and III).

Furthermore, Bradbury-Huang (2010) argues that quality in action research is multi-dimensional by proposing seven criteria to assess the quality of action research inquiries: clear articulation of the objectives, the extent of partnership collaboration and participation, contribution to action research theory-practice and literature, use of appropriate methods and process, provision of new ideas, reflexivity, i.e., description of the researcher's involvement and clarity about the context, and relevance beyond the immediate context.

The quality of the present research, especially Sub-studies II and III, can be examined through Bradbury-Huang's seven criteria. In both studies, I have tried to provide clear description of the purpose and objectives of my research as well as the objectives of the participating teachers' action research projects. The two sub-studies describe how the teachers collaborated and participated in their action research projects. Sub-study II, in particular, describes the formation of the action research projects and how the teachers worked together throughout their action research cycles. The description of the appropriate methods and the contribution of this research are described in Sections 4 and 6.5 respectively. The research provides new ideas with regards to the use of CAR in in-service teacher education, as well as the use of CAR in pre-service teacher education as recommended by the teachers. Despite the challenges, including shortage of resources, this research has shown that CAR, which is new among teachers in Zanzibari schools, is a viable teacher professional development approach.

In Sub-Studies II and III and in Section 4 of this research I describe my involvement in the teachers' action research projects, whereby my role as a facilitator and as a critical friend is clearly reflected upon.

TABLE 1 Shenton's (2004) suggestions for trustworthiness and strategies used

Criteria	Shenton's suggestions	Strategies used
CONFORMABILITY	Using various forms of triangulation.	Using more than one researcher to check the translation and the interview transcripts. Collecting data from more than one source (documents, interviews, reflective journals, and focus group discussions).
	Describing the limitations of the study.	Describing the limitations in the sub-studies and in the overarching summary and discussion. Reflecting on the ethical principles involved in and rigour of the research.
CREDIBILITY	Adopting appropriate research methods.	Using qualitative research methods
	Developing familiarity with the research participants.	Building rapport with the AR teams (sub-study II). Providing training in AR to the AR teams (sub-study II). Visiting the two schools during their action research projects.
	Using various forms of triangulation.	Collecting data from documents, interviews, reflective journals and focus groups discussions. Using more than one researcher to check the translation and interview transcriptions.
	Having debriefing sessions.	Holding regular debriefing meetings with the supervisors during data analysis.
DEPENDABILITY	Describing the methodology used in the research in detail.	Providing a description of the methodology in each of the sub-studies and in the overarching summary.
TRANSFERABILITY	Describing the research context and the phenomenon under study in detail.	Describing the context (Zanzibar), the two schools and the 20 teachers in the sub-studies and overarching summary.

5 OVERVIEW AND COHERENCE OF THE SUB-STUDIES

This chapter provides an overview of the three sub-studies. After briefly describing my role as the first author, the aims, research questions, datasets, methods of data collection and analytical techniques used in each sub-study are illustrated in Table 2, followed by a description of each of the sub-studies. Next, the interconnectedness of the sub-studies and key issues from the research are illustrated.

As the first author of all three sub-studies, I was responsible for the overall design of the research, the data collection, the data analyses and the writing of the manuscripts. I collected data during and after the teachers' CAR projects and also kept my own reflective journal. For convenience, I translated the interview data from Kiswahili into English. I also translated the interview data in order to readily access my continuous reflections and to ensure that I captured the real moments as they occured during the data collection process.

The second author of all the sub-studies helped to check the translation. During the data analysis stage, the second and the third authors provided guidance and support regarding how to analyse the data. After the data analyses, I had the responsibility of preparing the manuscripts for publication. The second and third authors of the sub-studies provided intellectual input and design work during the data analysis and writing stages. They also provided guidance and approved protocols regarding the publication process. I was responsible for the manuscript correction based on the double-blind peer-review process, proofreading and correspondence with the journal editors. Under the guidance of the second and third authors, I handled the manuscript submission, the revisions and the resubmission of the revised manuscripts to the journal editors.

TABLE 2 Original articles, research questions, data and analyses

Original Articles	Research Questions	Datasets	Analytical techniques
Article I Moving towards inclusion: How Zanzibar succeeds in transforming its education system	1. How has inclusive education been introduced into the Zanzibar education system? 2. How have teachers been prepared to promote inclusion?	Documents include the following: 1. Zanzibar Education Policy (2006) 2. Inclusive and Learner-friendly Education Policy (2013 draft) 3. Ministry of Education and Vocational Training reports, budget speeches and education plans 4. Inclusive Education Project implementation reports 5. Published and unpublished documents	Thematic content analysis
Article II Scaffolding teachers to foster inclusive pedagogy and presence through collaborative action research	1. How does collaborative action research contribute to empowering primary school teachers to make their pedagogy more inclusive? 2. What challenges do primary school teachers face in conducting collaborative action research?	1. One-on-one interviews with 20 teachers from two primary schools 2. The researcher's self-reflective journal 3. Teachers' self-reflective journals 4. Teachers' action research reports	Thematic content analysis
Article III Developing inclusive pre-service and in-service teacher education: Insights from Zanzibar primary school teachers	1. What do teachers recommend for inclusive pre-service teacher education? 2. What do teachers recommend for inclusive in-service teacher professional development?	1. One-on-one interviews with 20 teachers from two primary schools in Zanzibar 2. The researcher's self-reflective journal 2. Teachers' self-reflective journals 3. Teachers' action research reports 4. Two FGDs with teachers (action research teams)	Thematic content analysis

Generally, all the three sub-studies aimed to explore IE development in the study context and examine methods of increasing learning, participation and achievement (Figure 5). While Sub-study I focused on IE development at the macro (legislation and policies), micro (local communities' participation) and meso (teacher preparation and support) levels, the focus in Sub-studies II and III was mostly on the micro and meso levels (schools and teacher education institutions). Together, the three sub-studies address the need to coordinate the inclusive reforms taking place in the education sector. These reform and strategies for IE development should be coordinated through strong partnerships and collaboration between various stakeholders. While Sub-study I emphasises co-ordination and collaboration among the policymakers, Sub-study II focuses on collaboration among the school staff, and Sub-study III stresses collaboration and co-ordination between (1) pre-service and in-service teacher education, (2) universities/teacher training colleges and schools and (3) schools and communities.

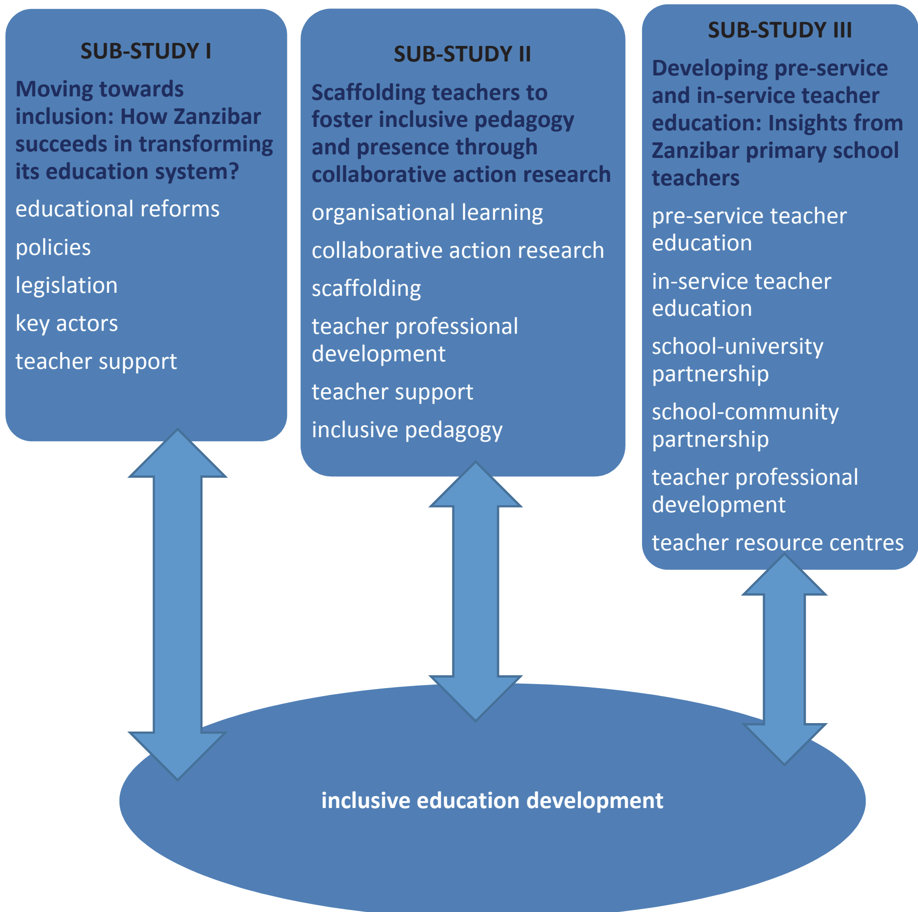

FIGURE 5 The three sub-studies' key issues related to inclusive education development

5.1 Sub-study I

Juma, S., & Lehtomäki, E. (2016). Moving towards inclusion: How Zanzibar succeeds in transforming its education system. *International Journal of Inclusive Education*, *20*(6), 673-684.

The aim of Sub-study I was to investigate how the education system in Zanzibar is being transformed to accommodate inclusive education, how inclusive education was introduced and who was involved in the process, how the implementation of inclusive education is organised in schools and how serving teachers were prepared to teach in inclusive classrooms. This process was compared to similar developments in other sub-Saharan African countries. Data were collected from relevant official documents and reports. The data were analysed using qualitative thematic content analysis.

The findings have indicated that the process of developing inclusive education in Zanzibar has been a concerted and collaborative effort involving local activists, governmental and non-governmental institutions and international development partners. There are several pieces of legislation and policies that support the implementation of inclusive education. These include the Zanzibar Strategy for Growth and the Reduction of Poverty, the Zanzibar Education Policy (2006) and the Persons with Disabilities (Rights and Privileges) Act No. 9 of 2006. Inclusive education was introduced in 2004 as a pilot project in 20 primary schools. The focus was on the sensitisation of the community concerning inclusive education, especially the inclusion of children with disabilities. This study has shown that over the 10 years (2005-2015) since the introduction of inclusive education, only about 30% of government schools received training on inclusive education. While more efforts were allocated to government primary schools, the data showed that very few public secondary schools, privately owned schools and vocational training centres were aware of inclusive education. The data revealed that there was an improvement in the community's awareness of the importance of and need for inclusive education in Zanzibar. Also, there was an increase in the number of children with disabilities who were enrolled in public schools. The 2006 Education Policy reforms have introduced a re-entry policy, allowing schoolgirls who become pregnant to continue with their studies instead of being expelled from school. This step may contribute to reducing the number of girls who drop out because of pregnancies.

In an attempt to alleviate the shortage of teachers who are trained in inclusive education issues, two government teacher training institutions, namely the Zanzibar Muslim Academy (Chuo cha Kiislam [CCK]) and the State University of Zanzibar (SUZA), introduced teacher education programmes to train teachers in inclusive education. However, this study has indicated the need to embed inclusive education in pre-service teacher training so that all teachers become aware of inclusive education, instead of relying on one-off workshops for training in-service teachers in inclusive education.

Another noteworthy finding of Sub-study I is the challenge regarding the language of instruction (English) experienced by teachers and pupils in Grades V and VI. The 2006 education policy reforms replaced Kiswahili with English as the language of instruction for mathematics and science in Grades V and VI. This study has shown that the use of English as a language of instruction is quite a challenge for teachers and leads to the exclusion of some learners during classroom teaching.

5.2 Sub-study II

Juma, S., Lehtomäki, E., & Naukkarinen, A. (2017). Scaffolding teachers to foster inclusive pedagogy and presence through collaborative action research. *Educational Action Research*, *25* (5), 720-736.

Sub-study II explored the role of collaborative action research (CAR) in developing teachers' capacity to improve their practice with regard to inclusion. In addition, the study sought to examine the challenges involved in conducting collaborative action research in schools. The findings of this sub-study are drawn from two CAR projects conducted by 20 teachers from two primary schools in Zanzibar, Tanzania. The data-gathering tools included semi-structured interview questions/themes, the teachers' own reflective diaries and reports and the researcher's field notes and reflective journal. The interview data were transcribed and then translated into English. The analysis of the data was performed by using thematic content analysis (Braun & Clarke, 2006; Saldaña, 2016; Bogdan & Biklen, 2007).

The study findings indicated that CAR empowers teachers to improve their inclusive practices. Collaborative action research instills teamwork and collegiality among staff members. In this study, CAR projects helped the participants to improve presence, learning and participation in the classroom among their pupils. This sub-study also revealed that teachers' zones of proximal development are developed through engagement in CAR, whereby they learn from one another and from their critical friend(s) various skills, including research skills and communication skills.

Introducing CAR to the teachers had its challenges. Despite CAR's many advantages, the study found that teachers encountered some challenges over the course of undertaking their CAR projects. These challenges were related to time, the writing of the reflective diaries and the documentation of the CAR activities, including writing reports. Furthermore, the study indicated that successful CAR projects in schools require support and encouragement from the school leadership (e.g., the head teacher) and other stakeholders, such as the Teacher Education Department, the Inclusive Education and Life Skills Unit and the Inspectorate Department.

5.3 Sub-study III

Juma, S., Lehtomäki, E., & Naukkarinen, A. (2017). Developing inclusive pre-service and in-service teacher education: Insights from Zanzibar primary school teachers *International Journal of Whole Schooling*, *13* (3), 67-87.

The aim of this sub-study was to examine the insights teachers gleaned from their CAR projects regarding the development of inclusive pre-service and in-service teacher education. Using the same data as Sub-study II, this sub-study also aimed to discuss the role of teachers' voices in informing teacher education development to ensure equity and inclusion in education. The qualitative thematic content analysis of the data indicated that:

- Teachers experience collaborative action research as valuable in developing their inclusive practices.
- Teaching methods in schools and teacher education curricula require reform to respond to students' diverse learning needs.
- Teachers recommend embedding inclusive education in pre-service teacher education so that all teachers can teach inclusively.
- Teachers found resource centres to be key in enhancing their professional development.
- School's organisational learning as well as school-community and school-university collaboration, may foster collaborative school cultures and inclusive in-service teacher education.

The study reveals that CAR is a powerful strategy for helping both in-service and pre-service teachers improve their practices and support learning for all learners. It was from this perspective that the teachers in this study recommended embedding CAR in pre-service teacher education programmes, along with the introduction of a compulsory inclusive education course. The study findings also indicate that the teachers want reforms in teacher education curricula so that all teachers are capable of addressing the diverse learning needs of all students. This was revealed in this study when the participating teachers recommended that reforms take place in the teacher education curricula in the study context. The need to make inclusive education compulsory for all student teachers during pre-service teacher education was a significant finding of Sub-study III.

Making good use of the available teacher resource centres is essential in supporting teachers' professional development for inclusive education. The participants in this study showed their preference for using this existing system of district-based teacher resource centres, which offer professional development opportunities for in-service teachers. However, the study revealed that the teacher resource centres must be improved in terms of infrastructure and teaching and learning materials, including Internet facilities. These teacher resource centres must be well-equipped so that the centres can be adequately

used to promote teacher professional development for inclusive education by making use of the freely available online materials from various providers, including EENET and Teacher Education in Sub-Saharan Africa (TESSA).

Finally, this study revealed that in order for CAR to flourish in schools, there is a pressing need to establish strong links between schools and the community, as well as between schools and universities, particularly faculties of education. Having such partnerships will help to foster collaborative work cultures and organisational learning in schools

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6 DISCUSSION

This chapter provides a discussion of the overall research, including the methodical choices, the insights into CAR gained by the participants, the empirical findings of the research and reflections on the theoretical and practical implications of the research. The focus of the sub-studies is on the development of inclusive educational policies, practices and teacher education, which are crucial in achieving local and global goals related to inclusive and equitable quality education for all.

6.1 Collaborative action research

The research at hand has provided insights into CAR, which has the potential to empower teachers in their profession (Makoelle, 2014a; Kayaoglu, 2015; Mnyanyi, 2014). One of the implications of this research is that CAR can be a useful tool with which to support teachers in their professional development as they endeavour to improve their pedagogical approaches and support for all children. This research has helped to change teachers' mindsets and attitudes towards conducting research. It has shown that if they are well-supported, teachers can act as researchers, even amid teaching and the other responsibilities of their workplaces. They can bridge the gap between research and practice. In Sub-study II, teachers have shown that they can investigate their own work-related problems and collaboratively work to solve these problems, despite the challenges they may face in doing so. In this research, teachers have shown that it is not impossible for them to solve problems related to inclusion in their respective schools. In Sub-study III, these teachers have also shown their desire to ensure that CAR is used as a tool for teacher professional development among both in-service and pre-service teachers.

As for the issue of sustainability, this research has also shown that what is needed is the close follow-up of and support for teachers. It was encouraging to discover that in both schools (Sub-studies II and III), teachers were able to

continue performing collaborative action research, even without a close support of an external facilitator. However, it should be noted that monitoring and encouragement are needed. In both schools, the teachers could only engage in more collaborative action research projects after a close follow-up and encouragement on the part of the researcher, in collaboration with the IELS Unit. In both schools, between 2016 and 2017, teachers conducted three more small action research projects, one in Primary School A and two in Primary School B.

Thus, this research provides evidence of changed attitude among teachers towards research. These teachers once viewed research as something conducted only by experts and felt that teachers did not have time to conduct research. The findings of this research project may rejuvenate the feeling that teachers can be more productive in their workplaces if they are systematically supported. In a way, this research project has also shown the usefulness of scaffolding among teachers. The findings of Sub-study II suggest that scaffolding may also work among adults if the scaffolding process is well-handled and teachers are encouraged to work collaboratively to improve their practices.

6.1.1 The role of collaborative action research in inclusive teacher education

This research project's findings have shown CAR's potential use in improving collegiality and professional development among in-service teachers. When CAR is introduced to pre-service teacher education, the reform of the assessment system used for teacher training colleges should also be considered.

Research shows that engaging pre-service and in-service teachers in CAR improves professional learning and the experience of the actual relationship between IE theory and real-life classroom and school practices (Darling-Hammond, 2010; Forgacs, 2012). Using CAR to help form relationships between serving teachers, student teachers and other educational stakeholders (such as school inclusion teams and parent-teacher association members) is supported by the literature. For example, Willegems, Consuegra, Struyven and Engels (2017) write that engaging pre-service and in-service teachers in CAR inquiries through school-university partnerships develops the former's zones of proximal development and enhances their reflection and learner-centred pedagogical skills (see also Elliot, 1991). Likewise, Darling-Hammond (2010) suggests the establishment of professional development schools for universities to foster professional learning among student teachers and serving teachers through collaborative inquiries, such as CAR. These partnerships are necessary in preparing teachers to make research-based decisions in order to confidently support learning for all students. In an extensive systematic review of collaborative research between in-service and pre-service teachers, Willegems et al. (2017, p. 244) conclude that 'If teacher education has the ambition to contribute to equity, we need collaborating teachers who are able to adapt to diverse pupils' needs and make decisions based on inquiry into their pupils learning.'

Integrating CAR into pre-service teacher education may have positive results (see Figure 6) in terms of identifying and solving learning barriers related to policies, practices, attitudes, resources and the environment (Kaplan & Lewis, 2013b). However, this step requires the transformation of pre-service teacher education curricula, materials and methods, as argued in Sub-study III. Otherwise, teacher education programmes will continue to unwittingly prepare prospective teachers to exclude some rather than including all learners in the classroom. Teachers require practice and experience to undertake research and use collaborative skills during their training. This necessitates collaboration between teacher training colleges or universities and schools. Such collaboration can help to fill the gap between teacher education and the real-life situation in schools, as well as to support schools in realizing IE (Hollenweger, Pantić & Florian, 2015). Thus, the issue of school-university collaboration is emphasised in Sub–study III. This collaboration is not devoid of challenges (Cochran-Smith & Lytle, 2007; Howes, 2009; Yashkina & Levin, 2008). Hence, careful planning and research are required before embarking on this form of collaboration. It is always important to investigate its feasibility and how to motivate teachers to engage in such collaborative inquiries in their careers.

The present research findings corroborate the findings regarding CAR found in research conducted in Tanzania (Mnyanyi, 2014) and South Africa (Makoelle, 2014a), which indicated that CAR is a viable and sustainable option for empowering teachers to collaborate, improve their pedagogical skills and respond to the diverse learning needs of their students. Another important finding of this research is that CAR enables teachers to become reflective professionals who have confidence, skills in experimentation and the ability to change their schools (Pelton, 2010; Worku, 2017). In addition, this research has shown that if they are well-supported in undertaking CAR projects, teachers can apply the practical, pedagogical and problem-solving skills they gain from such projects in their own classrooms (Darling-Hammond, 2010) and adapt to inclusive and collaborative school cultures (Forgacs, 2012).

The collaborative action research projects conducted by the teachers in this research (Sub-study II) enabled those teachers to work with school community members, such as parents and local government leaders, to identify and solve problems in schools. The projects also enabled teachers to improve collaboration and teamwork among themselves. However, as discussed in Sub-study II, several challenges have been identified related to using CAR in schools. Finding time to conduct action research amid a heavy teaching load and large class sizes was among the fundamental challenges that should be considered. One of the challenges experienced by teachers in this research was the writing of action research reports. This should be taken into consideration when developing collaborative action research in schools. Teachers may be engaged in conducting the action research projects but also face the challenge of writing about what they have been doing. As a solution to this problem, the researcher designed a template to help teachers in Zanzibar to write a simple action research report that can be adapted to suit specific contexts.

Preparing teachers to be responsive to the diverse learning needs of all students is essential in realising SDG 4: 'ensure inclusive and equitable quality education and promote lifelong learning opportunities for all' (UNESCO, 2015c, p. iii). This research has addressed the necessity of reforming pre-service and in-service teacher education to enable teachers to keep abreast of the changes that are taking place (Sub-studies III and I). These changes include the embedding of inclusive pedagogy across the teacher education curricula. Teacher education should prepare teachers to be responsive to the increasing diverse needs of all students. IE training should permeate all teacher-training programmes because as Forlin (2012, p. 4) argues, little attention has been paid to inclusive teacher education in many countries: 'teacher education for inclusion in most regions has been tokenistic at best and non-existent at worst.' Therefore, teachers in this research recommended that the focus should be expanded from in-service teacher education to include pre-service teacher education.

Focusing on pre-service training can help to ensure sustainable changes in schools and teachers' commitment to eliminating exclusionary factors from pupils' learning. The current research suggests a reorientation of pre-service teacher education programmes in colleges and universities towards IE. This will help to ensure that in the future, all teachers are capable of teaching inclusively. However, this must be well-coordinated. It is essential that all teacher-training institutions engage in close collaboration and consultation to design appropriate programmes that will enable teachers to teach inclusively. Teachers should also be prepared to forge a strong school-community partnership and develop positive attitudes among themselves and other community members towards IE (UNESCO, 2009).

The one-year course at CCK could be made compulsory for all teachers, while also introducing IE into pre-service teacher education. The recent initiative to introduce IE courses in the Zanzibar Muslim Academy, SUZA and Aga Khan Madrassa Resource Centre must be supported by the MoEVT. It seems that the initiative is heavily dependent on the external funding and facilitation of the training. The training should be extended to all the schools, as suggested by the research participants in Sub-study III. It is encouraging to note the efforts being undertaken by SUZA, which introduced an elective course in inclusive education at the master's level (from the 2017/2018 academic year). Although this is only an elective course in the Master of Education in Youth, Gender and Development programme, it is a step towards making inclusive education pervasive throughout teacher education. Inclusive pre-service teacher education is a decisive factor in combating educational exclusion and creating a sustainable, inclusive education system.

The use of teacher resource centres (TCs) to carry out professional development has been recommended by the teachers in Sub-studies II and III. In both Sub-studies, the teachers were shown to believe that TCs play a pivotal role in developing teachers' capacity to teach inclusively, creating their professional identities and encouraging them to collaborate. Thus, TCs should

be allocated more resources to enable advisors and resource teachers to offer quality training and support for the teachers in their clusters. If TCs remain poor in human, material and financial resources, they cannot be expected to deliver at an appropriate level. These TCs also require new approaches. They must utilise the abundantly available online resources to deliver training to the teachers in the clusters. However, to be able to make use of such resources, TCs must be renovated. Information and computer technology (ICT) personnel must be allocated to the TCs to work with other advisors and resource teachers, helping them to utilise free online resources effectively. It is also essential to equip TCs with fundraising skills so that they can secure funds to sustain a high level of activity.

FIGURE 6 Benefits of CAR in pre-service teacher education (drawn from previous research)

6.1.2 Collaborative organisational culture

In light of this research, IE can flourish in schools where a collaborative organisational culture is the norm. Schools may organise pedagogical support and guidance through the induction and peer mentoring of novice teachers as part of promoting lifelong teacher learning opportunities. However, such changes cannot occur if schools have limited autonomy due to a heavily centralised education system. Devolution can provide some autonomy to schools and teachers. Collaborative organisational learning cultures can be developed in schools by introducing collective in-service training days into the school calendars. These days can be used for collective teacher learning regarding inclusive education, with or without external facilitation. Students can be released while teachers are engaged in professional learning, and then, the teachers can apply what they learned in their classrooms. This step is of vital importance because teachers should constantly reflect on their pedagogical practices and stay abreast of current developments in the profession.

The findings of Sub-study II have indicated the need for such organisational learning mechanisms to achieve organisational change that promotes inclusion at school level, whereby schools can create collaborative relationships by drawing on the diverse strengths and capabilities of teachers and other members of the school community (Addleson, 1999; Senge, 1990; Edwards, 2005).

Teacher motivation and support in creating a learning culture and commitment to lifelong learning for collective and personal professional development have also been featured in this research. In Zanzibar and elsewhere in the SSA context, teachers must be motivated to transform their schools into learning organisations. As Mertler (2013) points out, both intrinsic and extrinsic rewards are worthy of consideration in fostering a collaborative work culture among teachers. Demotivated teachers may feel unvalued and burnt out. They will not be willing to take the initiative and run risks to improve their school performance. Such teachers are unlikely to work together to form communities of practice—groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly (Wenger, 2000). Schools should have distributed, facilitative and learning-focused leadership that helps to create an environment that is conducive to lifelong teacher learning (Silins, Zarins & Mulford, 2002). School leaders must support collective and individual teacher learning, rather than merely supervising it.

However, leaders will require adequate autonomy to make essential decisions about students' learning outcomes and teachers' professional learning. In order to transform schools into learning organisations, the Organisation for Economic Co-operation and Development (OECD) (2016) recommends developing a shared vision of learning for all students; establishing a culture of inquiry, innovation and exploration and promoting not only team teaching but also team learning and collaboration among teachers

and other staff. However, in order to sustainably transform schools into learning organisations through collaboration and teamwork, these strategies must be part of a systemic and systematic change rather than an isolated effort (Ainscow, 2004). Because IE emphasises collaborative rather than individual consciousness in combating exclusion (Slee, 2011), transforming schools into learning organisations that contribute to reducing educational and social exclusion is indispensable. Thus, CAR can be used as a powerful tool for developing teachers' capacity to transform their schools into learning organisations, which can improve not only student learning but also teacher learning.

6.2 Inclusive education as a cross-cutting issue

The ultimate goal of IE is to promote social cohesion by ending all forms of exclusion and discrimination and enabling all children and the young people learn to their full potential (Slee, 2010). Hence, the success of IE requires a multi-sectoral approach that draws support from various sectors (Sub-study I). Policy makers and all educational stakeholders must understand that IE cannot succeed if it is viewed as the responsibility of only the ministry responsible for education. Rather, it should be viewed as a cross-cutting issue, with the ministry responsible for education having the primary responsibility. It is important to note that effective IE can be achieved via strong links and collaboration with other sectors, such as health, food, public transport, the judiciary and security. In addition, for the successful implementation of IE in Zanzibar, policy objectives and strategies must be communicated to all stakeholders, such as teachers (including those in private schools), parents, educational officers, curriculum developers and other key ministries, apart from the ministry responsible for education (e.g., the ministry responsible for health, the ministry responsible for women, youth, and children and the ministry responsible for disability affairs). The findings of Sub-study I reveal the need for a national strategy for the implementation of IE policy in which the role of each stakeholder is clearly stipulated.

6.3 Teacher education for inclusion

The discussion in Sub-study III has focused on the need for and significance of reforms in inclusive teacher education. Every teacher should have an opportunity to experience both the theory and practice of inclusion throughout their careers. Reforms in pre-service teacher training programmes are needed to enable student teachers to deal with the increasing diversity of learners (Nketsia et al., 2016; Rouse, 2017; Florian, 2010), as well as the increasing scarcity of ready-made teaching and learning resources. The issue of teaching

and learning resources should be given due consideration when developing inclusive teacher education programmes in Zanzibar and similar contexts in the SSA region. However, these resources need not always be ready-made materials. As shown in Sub-study II, teachers can be motivated to collaborate with other members of school communities to improvise inclusive teaching and learning materials using locally available and low-cost materials. The example shown by the teachers in Sub-study II is worth exporting.

As suggested by the teachers in Sub-study III, inclusive in-service teacher training must be school-based, rather than selecting a few teachers for training and expecting them to cascade this training. A whole-school approach ensures collective initiatives among the teachers and the other members of the school community, ensuring that all teachers take part in supporting all learners.

6.3.1 Sustainability of support for inclusive education

As shown above, the MoEVT should now create sustainable initiatives to help promote inclusive education, as some long-term donors who have been supporting IE development in Zanzibar (e.g., the NFU) have. Inclusive education should cut across all the ministries to ensure that all children can attend schools close to their homes, actively participate in the learning process and reach their full potential, both socially and academically.

This research has shown that the implementation of IE does not require a blueprint for all countries. Sub-study I has discussed the need for Zanzibar and other regions in SSA to develop policy reforms and practices that are realistic, appropriate, sustainable, effective and relevant to the Zanzibari culture and context, rather than importing solutions from other cultures or contexts. Thus, there is a need to increase the depth and quality of IE competency among local educationists, teachers and MoEVT officers. This is important in ensuring that policy makers, teacher educators, teachers and all other educational stakeholders have a similar understanding of inclusive education. It is important to note that IE is not only about being reactive to the existing barriers to learning, participation and achievement. Rather, as Booth, Nes and Strømstad (2003) argue, it is about preventing new barriers from being created. To foster sustainability and localised initiatives to address challenges related to inclusion, Sub-studies II and III emphasise the importance of organisational learning practices in schools and teacher education institutions, as well as sustainable partnerships with the community.

6.3.2 Taking a holistic view of education

The development of IE necessitates reforms and commitment at the macro level (e.g., national policies, national development goals, international conventions and legislations), the meso level (e.g., teacher preparation and support system) and the micro level (e.g., school cultures and ethos, school organisational development, classroom practices and school-community partnership). The sub-studies in the present research were structured so as to address all these

levels. In light of this research, it is important to emphasise that a holistic view of the education system, encompassing both the private and public systems, must be adopted when considering an inclusive approach (UNESCO, 2005, p. 16). Furthermore, in many countries, especially in the global South, the public education system is generally considered lower in terms of the quality of education being provided as compared to private schools. Thus, poorer children tend to be limited to the public system. It is imperative, therefore, that education planners consider both the public and the private systems during planning in order to effectively address the needs of all learners and combat exclusion (UNESCO, 2005, p. 16).

Equally important is the need for a broader view of IE, one that is not confined to the four walls of a classroom. Using an inclusive lens, education is broader than schooling. Hence, in developing IE, it is worth considering forms of education other than formal schools. This view is of particular importance in Zanzibar, where a system of community- and religious-based education provided in Madrassas was established long prior to the formal education system. This system is still culturally and socially relevant. Thus, IE should be understood to encompass all forms education, formal and informal, public and private, and home based eduation for those childen who can not go to school at all (Stubbs, 2008).

6.3.3 Language of instruction

The issue of the language of instruction (LoI) has been thoroughly discussed in Sub-study I. Using English as the LoI beginning from Standard V has caused tension among not only pupils but also teachers (Maalim, 2015). Teaching through the mother tongue or the first language echoes social constructivist theories of learning (e.g., Vygotsky, 1978), which place the learner at the centre. In these theories, the teacher begins with what the learner knows, rather than what the learner is unfamiliar with. Thus, I strongly concur with the preponderance of the literature (e.g. Babaci-Wilhite, 2012; 2013a; 2013b; Maalim, 2015; Maalim, 2017; Nomlomo, & Vuzo, 2014), which favours the use of a familiar language for instruction at an elementary level.

6.4 Limitations and strengths of the research

This research has used qualitative methods of data collection and analysis. Because the qualitative approach is based on the researcher's interpretations, the researcher's subjectivity during the data collection and analysis may have limited the findings of the study. For example, because the interview data were translated from Kiswahili into English, some of the meaning may have been lost. The study was carried out only in two schools, both of which were urban. Thus, the situation in the rural schools could be different. Although the participating teachers showed that they were positive in terms of adopting CAR

to promote IE, it may not be wise to suggest that the teachers' insights into CAR would be shared by all teachers in Zanzibar. The issue of the sustainability of conducting CAR, without support from an outsider, is important. The orientation towards CAR that the teachers received may not have been sufficient to enable them to confidently sustain engagement in action research projects without close support. One strength of this research, especially Sub-studies II and III, is that it was carried out in real-life school situations. The participating teachers engaged in CAR projects to identify and attempt to use their practical, pedagogical and problem-solving skills to improve presence, participation and learning among their students.

6.5 Contribution and practical implications of the research

This research contributes to the field of IE research by demonstrating the potential role of CAR in helping teachers improve their practice and increase their pupils' learning, participation and achievement, as demonstrated in Sub-studies II and III. The experiences and insights gained have helped teachers develop their autonomy and agency as teacher researchers. This thesis also shows the power of teacher-initiated research, even in a resource-constrained context such as Zanzibar. It demonstrates the great strides that can be made when teachers are respected and supported, when attitudes are changed and when teachers work collaboratively with the community on something they all care about. Thus, a lack of material resources can be mitigated with social capital (McConkey & Mariga, 2014), will, ethos, empowerment and initiative.

Also, in this research, scaffolded learning was extended from its original context of learning among children to include adult learners, such as teachers. This research has introduced the notion of changing teachers' solo practices into collaborative practices, which are critical in promoting inclusion. Through engaging in collaborative evidence-based inquiries, such as CAR projects, teachers can take control of their own careers and educational development. This can be accomplished by establishing links between schools, teacher training colleges and universities, and school communities. Thus, this research acts as a channel for teacher voices.

The findings of the sub-studies reveal several factors that could improve education policy, practices and teacher education in Zanzibar. Through their CAR projects, the teachers participating in this research (Sub-study II) have demonstrated that IE is not only about the inclusion of children with disabilities but about all children, including those who are out of school for any reason. This has been demonstrated through the CAR project conducted in Primary School B. Developing quality inclusive education is key to all of the 17 Sustainable Development Goals, particularly SDG 4 (UNESCO, 2017). Reviewing the education policy to ensure that it takes into account the Education 2030 agenda, especially SDG 4, should be a priority.

Reviewing and revising the teacher education curricula, materials and methods used in teacher training colleges and universities is necessary to ensure gender sensitivity, inclusivity and equity in teacher education practices. This can be initiated by the relevant authorities in the MoEVT, in partnership with the faculties of education in universities and teacher training colleges. Because IE is a process rather than an event (Booth 2013; UNESCO, 2005), its implementation requires gradual transformations of the entire education system (Sub-study II). One of the transformations that is required, as established in this research, is the development of schools into learning organisations and communities of practice (DuFour, DuFour, Eaker & Many, 2010).

Clearly, further research will be required to extend our knowledge of the factors and conditions that can foster organisational learning and collaborative work cultures in schools. Further studies to show how teachers can effectively engage in collaborative inquiries as they endeavour to support all learners would be of interest. Also, research into the mechanisms of fostering school-university partnerships to promote IE through the integration of CAR into pre-service teacher education appears fully justified, as discussed in Sub-study III.

Among the lessons learned from the present research is that IE development requires a holistic approach, one involving wide-ranging transformations of the entire system of education. Promoting IE will not be effective if it falls within the remit of only one unit or department, such as the IELS unit. It should involve the entire ministry responsible for education, as well as other key ministries, non-governmental organisations and the community. Generally, this research provides three sets of issues regarding IE: first, issues related to education policymakers' attempts to ensure inclusion and equity at a policy level; second, considerations regarding improving teacher practices to encourage inclusion and, third, strategies to improve teacher education for inclusion. These issues are illustrated in Figure 7.

Inclusive education requires educational and other related policies to support the presence, participation and achievement of all learners. It is important that education policies encourage the use of a familiar language, especially the mother tongue, particularly at the primary level. To ensure inclusion, gender balance and equity in education policies should be clear in IE policies and not be confused with special education. Hence, there is a need to demystify the concept of IE (Pather, 2007) so that all policymakers and the policy implementers understand the bigger picture of IE and remain on the same page.

In terms of developing inclusive practices in the education system, this research finds the need to improve schools' and teachers' practices concerning classroom organisation, communication, methodology, collaboration, partnership and student assessment. Classroom seating arrangements should encourage maximum interaction among the students and between the teacher and the students. For example, arranging tables or desks in cluster or semi-circle, instead of in rows, may promote positive interactions among the

students. However, at times, the use of rows can be more appropriate, depending upon the nature of the task given to the students (Wannarka & Ruhl, 2008). Also, teacher-student interactions can be improved by using a familiar language. As seen in Chapter III, the use of inclusive pedagogy, such as differentiated instruction, co-teaching, and peer tutoring, can improve students' participation and achievement.

Equally important is the need for schools and teachers to change the way they assess student learning. This can be done by using formative assessment techniques, in combination with tests and examinations. Hence, teachers must be supported in making use of various assessment techniques, as encouraged in IE (Nketsia et al., 2016). Teachers should be supported in engaging in such strategies because they may not have covered them in their initial teacher training. Teachers' agency as researchers, as advocated by Stenhouse, is important in changing teachers' practices. This can be achieved through supporting teachers in engaging in CAR enquiries, as suggested in Sub-study II. Engaging teachers in CAR will also help to expand their collaboration and partnership with the community, which is an important element of developing IE (UNESCO, 2003; Forgacs, 2012). However, one lesson learned from this research is that time and other resources are crucial in supporting all staff in engaging in collaborative inquiries.

Infusing IE and CAR throughout pre-service teacher education as recommended by the teachers in this research may help to prepare prospective teachers to confidently identify and overcome barriers to learning and inclusion (Kaplan & Lewis, 2013b). The teachers recommended the introduction of CAR into pre-service teacher education which deserves attention but also requires careful consideration how to do it. Given the context of this research and in many other countries in the SSA region, teacher training colleges and universities may not presently have the necessary conditions and resources to enable student teachers to conduct action research projects during their practicums. CAR is not intended to be a short-term intervention introduced by an outsider but rather a continuous and collaborative learning process 'to create sustainable learning capacities and give participants the option of increasing control over their own situation' (Greenwood & Levin 1998, p. 18). Thus, it would be wise to initially pilot CAR between school teachers and schools/faculties of education before trying it between school teachers and student teachers.

Teacher training institutions must ensure that they allocate sufficient hours for student teachers' practicums, along with proper supervision and support. In the same way, in-service teachers require on-going professional development through their teacher resource centres and partnerships with teacher training institutions.

6.6 Final thoughts

This research explored the process of developing inclusive education in the research context. The research has clearly shown that developing inclusive education requires a concerted approach, one in which all the educational stakeholders (e.g., the ministry of education, other key ministries, learners, teachers, curriculum developers, school inspectors, teacher education institutions, non-governmental organisations and the community) have a shared vision of and positive attitude toward IE and everyone plays his or her part. It should be borne in mind that the process of developing IE cannot be successful without changing the system, which is deeply rooted in values and assumptions that are incompatible with the philosophy and values underpinning IE. In Carrington's words, 'inclusion needs a different school culture' (Carrington, 1999, p. 257). Inclusive education has brought new challenges to the classroom and other sites of educational provision. It is obvious that changes are necessary not only in teacher preparation but also in the way schools develop inclusive cultures (Zollers, Ramanathan & Yu, 1999) and transform themselves into learning organisations. Developing clear policies and legislation that support IE is a necessary but not a sufficient factor in creating inclusion. Policies must be implemented with clear guidelines and support from policy implementers, such as teachers. The findings of this research have clearly shown that supporting both pre-service and in-service teachers in developing inclusive attitudes and practices through collaboration and partnership is essential to IE. Consequently, reviewing and revising teacher education curricula, methods and materials to bring them to line with IE will help ensure inclusion and equity.

policy

- Encourage inclusion and equity
- Support presence, participation and achievement of all learners
- Use mother tongue as LoI
- Support gender balance and equity

practice

- Collaborative action research to foster research-based practice
- Meaningful involvement of parents and community
- Inclusive pedagogy
- Culturally responsive pedagogy
- Gender-responsive pedagogy
- Familiar language in the classroom
- Positive disciplinary measures
- Authentic assessment of learning
- Classroom organisation promoting maximum interaction and participation
- Welcoming and supporting all learners

teacher education

- Developing and supporting teacher problem-solving skills through school-university CAR inquiries
- Embedding IE throughout pre-service teacher education
- Allocating sufficient practicum days, with proper supervision and support, to student teachers
- Using TRCs for IE professional development

FIGURE 7 Issues for consideration in IE development

SUMMARY

This research explored the development of inclusive education in the Zanzibar education system. Specifically, the research examines how the concept of inclusive education is contextualised and defined in Zanzibar, the introduction of relevant legislation and policy to support inclusive education, how key national and international stakeholders contributed to the process, how in-service teachers are supported in implementing IE practices in their schools, the role of collaborative action research in helping teachers teach inclusively and how pre-service teacher education undergoes inclusive reform.

The research consists of three interrelated sub-studies, which have been published in peer-reviewed journals. Sub-study I explores the historical development of inclusive education in the study context. In this sub-study, the main focus was to examine the process of developing inclusive education in terms of policies and legislation, reforms of the educational system, the key actors in the development of inclusive education and how serving teachers were prepared for inclusive education. Sub-study II examines the role of collaborative action research in fostering presence, participation and achievement among all learners in schools. Drawing on the insights teachers gained in their CAR projects, Sub-study III is concerned with developing inclusive pre-service and in-service teacher education.

This research was conducted between 2014 and 2017. The data were collected between 2014 and 2015, and the analysis was completed in 2017. The study findings are expected to have direct theoretical and practical implications, informing policy makers and implementers about the strengths, gaps, tensions and opportunities related to IE.

This research project draws on the social model of learning difficulties and disabilities (Booth & Ainscow, 2002), which places the learner at the centre. Hence, this project is about changing the education system to fit the learner, not changing the learner to fit the system. This model emphasises that education systems must be flexible enough to accommodate all learners, regardless of their (dis)abilities. The systemic changes needed include reviewing educational policies and redesigning teacher education curricula, materials and methods to accommodate the principles and practices of IE. This will lead to redesigning the initial teacher education curricula, as well as continuous professional development policies and guidelines, in order to support all teachers in promoting IE.

Another theoretical basis for this research project is social constructivist theory, especially the zone of proximal development (ZPD) (Vygotsky, 1978) and its scaffolding metaphor (Bruner 1983). Social constructivism, as a theory of learning, emphasises the social contexts of learning, as well as hands-on and real-world experiences, such as action research. Vygotsky distinguishes between two types of learning development: (1) actual learning development and (2) potential learning development. The ZPD (see Figure 1), Vygotsky argues, is 'the distance between the actual development level as determined by

independent problem solving and the potential development as determined through problem solving under adult guidance or in collaboration with a more capable peer' (Vygotsky, 1978, p. 86). This means that the notion of the ZPD assumes that the present level, or actual development, of the learner is enhanced to a higher level of cognition through increased interactions, involvement and collaboration with a more skilled person. The basic assumption of scaffolding is that when learners are well-supported in solving a problem, they will ultimately manage to perform this task independently. During the scaffolding process, support is gradually withdrawn so that the learners can proceed to work independently. Based on this theory, this research project uses collaborative action research with teachers. This CAR developed their problem-solving capacities and allowed them to address barriers to learning. In collaboration with 20 teachers from two primary schools in Tanzania, the researcher conducted action research (*with* rather than *on* the teachers) and collected data through the researcher's and the participating teachers' reflective journals, the teachers' action research reports, one-on-one interviews with each of the 20 teachers and two focus group discussions with the teachers. All the interviews were audio-recorded, transcribed and then translated from Kiswahili into English. Qualitative thematic analysis (Braun & Clarke, 2006; Lichtman, 2013) was applied to analyse the data. This research project primarily uses qualitative methods of data collection and analysis. Qualitative thematic analysis is used in this study in relation to the relevant policy documents for the development of inclusive education in Zanzibar. These documents include the Zanzibar Education Policy (2006), Inclusive and Learner-friendly Education Policy (2014 draft), Inclusive Education and Life Skills Unit Strategic Plan and Spinster and Single-Parent Children Protection Act No.4 (2005).

This research has revealed that the process of developing inclusive education in the study context was a result of initiatives by individual activists, NGOs, the government and the community. Although IE was introduced more than a decade ago, less than 20% of schools have experienced IE training. The 2006 education policy reforms included various steps in support of the promotion of IE (e.g., a re-entry policy for schoolgirls who become pregnant, the abolition of school fees in primary schools and increasing the years of compulsory basic education from ten to twelve, including two years at the pre-primary level). Nevertheless, other aspects of these reforms may hinder inclusion. These include the use of English (instead of Kiswahili—the mother tongue of almost all teachers and students) as a medium of instruction for mathematics and science beginning in Grade V. Also, the main focus of IE training has been government primary schools, leaving out the majority of private schools, government secondary schools and vocational training centres.

The teachers found CAR to be a useful tool in fostering a collaborative work culture. It increased their pedagogical problem-solving skills and confidence in identifying and overcoming barriers to learning for all students. The participating teachers reported challenges related to time, motivation and

report-writing skills while undertaking their CAR projects. The findings have also revealed the need for a school-based approach when introducing CAR into schools. From their CAR projects, the teachers also gained insights into the development of inclusive pre-service and in-service teacher education. They recommend the integration of CAR and inclusive education into pre-service teacher education and the use of district-based teacher resource centres in fostering teacher professional development for inclusive education.

This research has identified a number of important implications for future practice. One key policy priority should be ensuring that all teachers are prepared and supported in addressing barriers to learning for all students. A reasonable approach to tackling this issue could be to create guidelines for the implementation of IE in all schools and teacher education institutions. Another important implication of this research is that IE should be promoted as a cross-cutting issue, rather than being the sole responsibility of the ministry responsible for education. Also, a number of teacher education reforms are needed. These include making IE an overarching concept in both pre-service and in-service teacher education, integrating CAR into pre-service teacher education curricula, using teacher resource centres to foster teacher professional development for inclusion and using a familiar language of instruction. Another noteworthy strategy could be to revise and update learning materials and resources in order to promote active learning.

Taken together, the lessons learned from this research may contribute to supporting teachers in identifying and addressing barriers related to policies, attitudes, practices, the environment and resources and thus help realise the UN’s SDG 4.

YHTEENVETO

Väitöskirjan lähtökohtana oli tarkastella inklusiivisen koulutuksen (inclusive education, IE) kehittämisprosessia Sansibarin koulutusjärjestelmässä. Siinä tarkastellaan erityisesti inkluusion käsitteen kontekstualisoitumista ja määrittymistä Sansibarilla, aiheeseen liittyvän lainsäädännön ja sitä tukevien politiikkojen toteutumista sekä keskeisten kansallisten ja kansainvälisten sidosryhmien osallistumista inkluusioprosessiin. Tutkimuskohteena on myös opettajien tukeminen osallistavien käytäntöjen toteuttamisessa – esimerkiksi yhteistoiminnallisen toimintatutkimuksen (collaborative action research, CAR) avulla – ja opettajien peruskoulutuksen kehittäminen inkluusioperiaatteiden mukaisesti.

Tutkimus koostuu kolmesta toisiinsa liittyvästä osatutkimuksesta, jotka on julkaistu vertaisarvioiduissa julkaisuissa. Osatutkimus I käsittelee inklusiivisen koulutuksen historiallista kehitystä tutkimuskontekstissa. Siinä keskitytään kehittämisprosessiin liittyvään politiikkaan ja lainsäädäntöön, koulutusjärjestelmän uudistuksiin ja avaintoimijoihin sekä siihen, kuinka ammatissa jo toimivia opettajia valmennettiin inkluusioon. Osatutkimus II tarkastelee yhteistoiminnan roolia oppijoiden läsnäolon, osallistumisen ja koulusuoriutumisen tukemisessa. Osatutkimus III paneutuu inkluusiota edistävän opettajien perus- ja täydennyskoulutuksen kehittämiseen hyödyntäen tutkimukseen osallistuneiden opettajien toimintatutkimuskokemuksia.

Tutkimus toteutui vuosina 2014–2017 siten, että tutkimusaineisto kerättiin vuosina 2014 ja 2015 ja analyysi valmistui vuonna 2017. Tuloksista on välitöntä teoreettista ja käytännön hyötyä päättäjille ja päätösten toimeenpanijoille, koska ne valaisevat inkluusiota edistävän opettajien perus- ja täydennyskoulutuksen kehittämisen etuja, puutteita, jännitteitä ja mahdollisuuksia tutkimuskontekstissa.

Tutkimusprojektin taustalla on oppimisvaikeuksien ja vammaisuuden sosiaalinen malli (Booth & Ainscow, 2002), joka asettaa oppijan keskiöön. Keskeistä mallissa on koulutusjärjestelmän muuttaminen oppijalle sopivaksi, ei oppijan muuttaminen järjestelmään sopivaksi. Malli korostaa, että koulutusjärjestelmien tulee olla joustavia ja mukautua kaikkien oppijoiden tarpeisiin, riippumatta heidän kyvyistään tai vammoistaan. Systeemimuutoksiin kuuluvat koulutuspolitiikan tarkistaminen ja opettajankoulutusohjelmien, materiaalien ja menetelmien uudelleensuunnittelu vastaamaan inklusiivisen koulutuksen periaatteita ja käytänteitä. Tämä johtaa opettajien peruskoulutuksen opetussuunnitelmien sekä täydennyskoulutuspolitiikan ja -ohjeistuksen uudelleenmuotoiluun, jotta kaikkia opettajia pystytään ohjaamaan ja tukemaan inkluusion toteuttamisessa.

Tutkimusprojektin taustateoriana toimii myös sosiaalinen konstruktionismi, erityisesti *lähikehityksen vyöhyke* (*Zone of Proximal Development,* ZPD) (Vygotski, 1978) ja sen *scaffolding*-metafora eli oppimisen oikea-aikainen tukeminen (Bruner, 1983). Oppimisteoriana sosiaalinen konstruktionismi korostaa oppimisen sosiaalisia konteksteja sekä aitoja käytännön kokemuksia, kuten toimintatutkimusta. Vygotski erottaa kaksi oppimisen kehityksen tyyppiä: (1) aktuaalinen oppimisen kehittyminen ja (2) potentiaalinen oppimisen kehittyminen. Lä-

hikehityksen vyöhyke ZPD (ks. kuva 1) on Vygotskin mukaan aktuaalisen eli nykyisen kehitystason (itsenäinen ongelmanratkaisu) ja potentiaalisen eli mahdollisen kehitystason (ongelmanratkaisu aikuisen ohjauksessa tai yhdessä edistyneemmän vertaisoppijan kanssa) välinen etäisyys (Vygotski, 1978, s. 86). Oppijan kehitys siis saavuttaa korkeamman kognitiivisen tason lisääntyvän vuorovaikutuksen, osallistumisen ja yhteistyön kautta tai taitavamman henkilön ohjauksessa. Perusolettamus oppimisen oikea-aikaisessa tukemisessa on, että kun oppijan ongelmanratkaisua tuetaan oikealla tavalla, hän pystyy myöhemmin suoriutumaan tehtävästä itsenäisesti. Koko scaffolding-prosessin ajan tukea vähennetään asteittain, jolloin oppija pystyy jatkamaan työskentelyä itsenäisesti. Tämän teorian pohjalta tutkimusprojektissa käytettiin opettajien yhteistoiminnallista toimintatutkimusta, jolla pyrittiin kehittämään heidän ongelmanratkaisukykyään tartuttaessa erilaisten oppijoiden oppimishaasteisiin. Tutkija paneutui toimintatutkimukseen yhteistyössä 20 opettajan kanssa, jotka työskentelivät kahdessa tansanialaisessa alakoulussa (pikemminkin *heidän kanssaan* kuin *heitä* tutkien). Tutkimusaineisto kerättiin tutkijan ja näiden opettajien refleksiivisistä päiväkirjoista, opettajien toimintatutkimusraporteista, opettajien kahdenkeskisistä haastatteluista ja kahdesta opettajien fokusryhmäkeskustelusta. Kaikki haastattelut nauhoitettiin, litteroitiin ja käännettiin suahilista englanniksi. Aineistoa tutkittiin laadullisella teema-analyysillä (Braun & Clarke, 2006; Lichtman, 2013). Tutkimusprojektin pääasialliset aineistonkeräys- ja analyysimenetelmät ovat laadullisia. Laadullista teema-analyysiä käytetään analysoitaessa Sansibarin inklusiivisen koulutuksen kehittämistä linjaavia asiakirjoja, joita ovat Zanzibar Education Policy (2006), Inclusive and Learner-friendly Education Policy (2014, luonnos), Inclusive Education and Life Skills Unit Strategic Plan, The Spinster and Single Parent Children Protection Act No. 4 (2005).

Tutkimus osoitti, että inklusiivisen koulutuksen kehittämisprosessi tutkimuskontekstissa oli tulosta useiden tahojen – yksittäisten toimijoiden, kansalaisjärjestöjen, hallituksen ja yhteisöjen – aloitteellisuudesta. Vaikka inkluusioperiaatteet otettiin käyttöön yli vuosikymmen sitten, alle 20 % kouluista on siihen liittyvän koulutuksen piirissä. Vuoden 2006 koulutuspoliittisiin uudistuksiin sisältyy useita inkluusiota edistäviä toimenpiteitä (esim. raskauden jälkeistä kouluun paluuta tukeva ohjelma, lukukausimaksujen poistaminen alakouluista [heinäkuusta 2015 lähtien] ja oppivelvollisuuden nostaminen 10 vuodesta 12 vuoteen, johon sisältyy kaksi vuotta esiopetusta). Uudistuksissa on kuitenkin myös seikkoja, jotka voivat estää inkluusion toteutumista. Niistä mainittakoon englannin kielen käyttö (suahilin sijasta, joka on lähes kaikkien opettajien ja oppilaiden äidinkieli) matematiikan ja luonnontieteen opetuksessa viidenneltä luokalta lähtien. Inkluusiokoulutuksen pääpaino on myös ollut valtion alakouluissa, joten se ei ole koskenut suurinta osaa yksityiskouluista, valtion koulujen ylempiä asteita eikä ammatillisia oppilaitoksia.

Yhteistoiminnallisesta toimintatutkimuksesta saamiensa kokemusten perusteella opettajat ovat pitäneet toimintatutkimusta hyödyllisenä menetelmänä, koska se edistää yhteistoiminnallista työkulttuuria, kehittää pedagogisia ongelmanratkaisutaitoja ja lisää varmuutta tunnistaa ja poistaa oppimisen esteitä.

Opettajat kertoivat kuitenkin toimintatutkimuksen haasteista, jotka liittyivät aikaan, motivaatioon ja raportointitaitoihin. Tulokset toivat esille tarpeen käyttää koululähtöistä lähestymistapaa vietäessä yhteistoiminnallista toimintatutkimusta kouluihin. Opettajat saivat projekteistaan myös ideoita inkluusiota edistävän opettajien perus- ja täydennyskoulutuksen kehittämiseen. He suosittelevatkin yhteistoiminnallisen toimintatutkimuksen ja inkluusion sisällyttämistä opettajien peruskoulutukseen sekä alueellisten opetusresurssikeskusten käyttöä inkluusioon liittyvää osaamista kehitettäessä.

Tutkimus tarjoaa useita merkittäviä koulutuksen kehittämisehdotuksia. Ensisijaisena toimintaperiaatteena tulisi olla, että kaikkia opettajia ohjataan ja tuetaan kaikkien oppilaiden oppimisen esteiden poistamisessa. Tämä olisi järkevää toteuttaa ohjeistamalla inkluusiokäytänteitä kaikissa kouluissa ja opettajankoulutuslaitoksissa. Tutkimustulosten perusteella inkluusiota tulisi lisäksi edistää laaja-alaisesti, jolloin se ei olisi ainoastaan koulutuksesta vastaavan ministeriön vastuulla. Opettajankoulutuksessa tarvitaan myös lukuisia olennaisia uudistuksia. Niitä ovat inkluusion käsitteen sisällyttäminen laajasti kaikkeen opettajien perus- ja täydennyskoulutukseen, yhteistoiminnallisen toimintatutkimuksen integrointi opettajien peruskoulutuksen opetussuunnitelmiin, opetusresurssikeskusten käyttö opettajien inkluusioon liittyvän ammatillisen kehityksen tukena sekä oman kielen käyttäminen opetuksessa. Yksi merkittävä toimenpide voisi olla myös oppimateriaalien ja resurssien tarkistaminen ja päivittäminen niin, että ne tukisivat aktiivista oppimista.

Kaiken kaikkiaan kuvatut tutkimustulokset voivat osaltaan auttaa opettajia tunnistamaan politiikkaan, asenteisiin, käytäntöihin, ympäristöön ja resursseihin liittyviä esteitä sekä tarttumaan niihin YK:n *Education 2030* -agendan tavoitteiden mukaisesti.

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APPENDICES

APPENDIX I : INFORMED CONSENT FORM

This is to confirm that I willingly agree to participate on a study carried out by Mr. Said K. Juma, of the State University of Zanzibar, Tanzania and University of Jyvaskyla, Finland. Mr. Juma has provided me with all the information that I have requested in order to make the voluntary decision to join his study on *Action research for inclusion.* He has also made me aware that I may withdraw from the study at any point.

I give permission for the information produced during the study sessions (interview data, focus group discussion and any written materials) to be used in academic research, lectures and articles, and any other publications. In addition, I give permission for audio-recording of my voice during the interview/ focus group discussion. The information may be presented anonymously without any identifying information.

Date ______________________ Name and signature of the participant

____

____

Date ______________________ Name and signature of the researcher

____

____

APPENDIX II: GUIDING QUESTIONS/THEMES FOR INTERVIEW/ FOCUS GROUP DISCUSSION

- Please tell me briefly about your AR research team and project. *Tafadhali nieleze kwa ufupi kuhusu timu yenu ya Utafiti Kazini na kuhusu utafiti wenu.*
- How were you organised as a team? (How did you divide the roles amongst yourselves? *Jee mlijipanga vipi kama timu? (Vipi mligawana kazi?)*
- What changes has your team observed as a result of your AR project? *Ni mabadiliko gani ambayo timu yenu imeyaona kufuatia utafiti wenu?*
- How willing are you to continue to do AR with your colleagues? Why? *Ni kwa kiasi gani wewe binafsi uko tayari /unaridhia kuendelea kufanya utafiti na wenzako kazini? Kwa nini?*
- What challenges did your team meet? *Jee mlipata changamoto gani katika timu yenu?*
- How did you overcome these challenges as a team? *Ni vipi mlikabiliana na changamoto hizi katika timu yenu?/ Nyinyi kama timu mlizitatuaje changamoto mlizokabiliana nazo?*
- What have you personally, as a teacher learnt, from this project? *Jee wewe binafsi kama mwalimu umejifunza nini katika utafiti huu?*
- How would you personally encourage other teachers in your school or in other schools to conduct AR? (Why?) *Ni vipi wewe utawashajiisha walimu wengine katika skuli yako au skuli nyengine kufanya utafiti kazini? (Kwa nini?)*
- What do you think are the limitations of AR? *Kwa fikra zako, kasoro za utafiti kazini ni zipi*?
- How do you think we can overcome the limitations? *Unadhani tunaweza kuziondoa vipi kasoro hizi?*
- How can IE be improved through AR? *Vipi unaona utafiti kazini unaweza kuimarisha/kuendeleza elimu mjumuisho?*
- From your experience of participating in AR project, what does AR mean to you? *Kutokana na uzoefu uliopata katika utafiti huu, je utafiti kazini unamaanisha nini kwako?*
- How would you explain AR briefly to your colleague who has never heard about AR? *Kwa mwenzako ambaye hajawahi hata kusikia kuhusu Utafiti kazini, vipi utaeleza kuhusu utafiti kazini kwa ufupi?*
- What is your advice to the Ministry of Education about using AR to improve inclusion in schools? *Una ushauri gani kwa Wizara ya Elimu kuhusiana na kutumia utafiti kazini katika kuendeleza mjumuisho katika skuli?*

APPENDIX III : THE STUDY PARTICIPANTS AND THEIR COLLABORATIVE ACTION RESEARCH PROJECTS

Sub-studies II and III involved 20 teachers from two public primary schools enrolling pupils from Standard (Grade) I to Standard VI. Of these teachers, four (two from each school) worked as special education teachers in the special units. The remaining 16 teachers worked as regular education teachers for Standards I to IV. Most of the teachers (17) had undergone formal teacher training in a recognised teacher training college or university. Of the four teachers working in the special units, only one had undergone two-year specialised training as a special education teacher; the rest had only attended short courses (between two weeks and three months) on special education.

Like many other schools in Zanzibar, both schools operate a double shift system. The first shift runs from 7:00 a.m. to 12:50 p.m. The second shift begins at 1:00 p.m. and ends at 5:55 p.m. The pupils and their teachers in one shift alternate monthly with the other pupils and teachers such that those who are in the morning shift in one month will be in the afternoon shift in the following month. The subjects taught are Kiswahili, Arabic, English, Islamic religion, science, social science, mathematics, geography, physical education, vocational education, civic education, and information and communications technology. The language of instruction at primary level school is Kiswahili except for mathematics and science which are taught in English beginning from Standard V (MoEVT, 2006).

Primary School A's action research project

Primary School A is located in the centre of Zanzibar town, on Unguja Island. The total number of pupils is 1659 (50.2% girls and 49.8 % boys) as of date. There are 53 teachers (91 % female and 9 % male). The assistant head-teacher is a special educational needs teacher and the rest of the teachers have only received short (between one and 14 days) training on special education. This school has two 'special units' within the school; one for pupils with developmental disabilities (13 pupils – nine males and four females) and the other 'unit' is for pupils with visual impairments (6 pupils – two girls and four boys). There are three teachers in the unit for pupils with visual impairments and two teachers in the unit for pupils with developmental disabilities. Some pupils who show 'improvement' in the units are moved into the mainstream classes in the school.

What did they do? How can we improvise tactile teaching and learning materials in order to include all pupils in the classroom?

Why did they do it?

- Teachers had observed that some of their colleagues do not use inclusive teaching aids during their lessons.
- Some pupils cannot actively participate during the lessons.

How did they do it? **:** Collected data through: Observation and focus group discussions (FGD) with teachers.

What did they discover?

- Not all pupils can actively participate in the lessons. One reason is that teachers do not use inclusive teaching aids.
- The teaching aids are not available at school.
- Teachers do not know how to make the teaching aids using low- or no-cost locally available materials.

What action did they take?

- Organised a workshop with 17 other teachers.
- Learned by doing. They made a number of tactile teaching aids.
- The facilitator was one of the teachers in the action research team.
- Two teachers with visual impairments were involved.

What was the result?

- A number of tactile teaching aids were produced.
- Teachers learned how to make and use the materials.
- Students enjoyed the lessons.
- Pupils' participation improved in the lessons.
- Teachers were inspired to learn more about how to include all children in lessons.
- Teachers learned basic action research skills.

Primary School B's action research project

Primary School B is located on Pemba island, and has 1, 233 pupils (46% girls and 54% boys) and 32 teachers (97% female and 3% male) as of date. Within the school compound is a special unit for pupils with developmental disabilities. There are three pupils who are deaf learning in the mainstream classes. By 2015 the unit had 16 pupils (12 boys and 4 girls). Five out of the 32 teachers work in the special unit. These are general education teachers who have only received some short (between one and four weeks) training on special education.

What did they do? How to improve pupils' attendance on Fridays?

Why did they do it? *"It was a big problem, sometimes only 30 or 35 out of 70 pupils (in one classroom) are present, so you can't teach only half of the class."* (T6B)

How did they do it? Collected data through Observation, Interview and FGDs.

What did they discover?

- Pupils attend marriage ceremonies to get 'free lunch'
- Some teachers are also absent because of attending marriage ceremonies or other reasons

- Friday is a ‘short’ school day. It is also the last day before weekend. Thus the pupils want to have a long weekend (Friday, Saturday, and Sunday)
- Some pupils have to look after their siblings while their parents/guardians are attending marriage ceremonies.

What action did they take?

- Identifying and meeting with the pupils who were absent.
- Meeting and discussing the matter with parents, school leadership, and community leaders.
- Interviewing teachers.

What was the result?

- Improved pupils’ attendance.
- Improved teachers’ inquiring skills.
- Improved teachers’ collaboration and teamwork.
- Improved teacher-pupil communication.

APPENDIX IV: RESEARCH CLEARANCE LETTER FROM THE UNIVERSITY OF JYVASKYLA

UNIVERSITY OF JYVÄSKYLÄ

FACULTY OF EDUCATION

24 June 2014

Att. State University of Zanzibar

Research Permission Request

With this letter I would like to request a research permit for Mr **Said Khamis Juma,** a doctoral student at the Faculty of Education, University of Jyväskylä in Finland. His doctoral research plan complies with the required criteria, including research ethics, and has been accepted by the Faculty.

As an important part of his doctoral research Mr. Juma plans to collect data in schools and with key stakeholders on inclusive education in Zanzibar. He has discussed the data collection process with the supervisory group of doctoral studies.

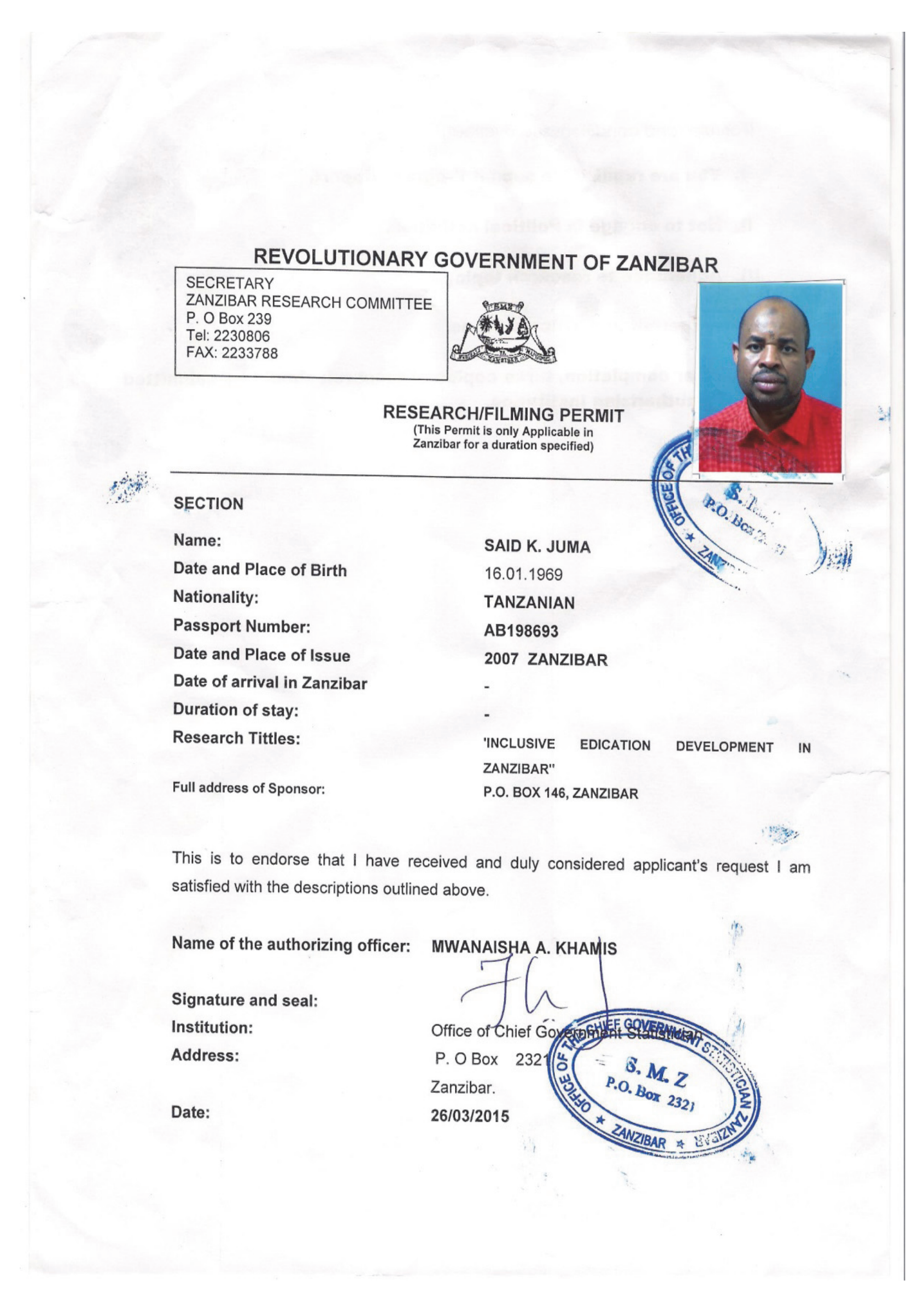
The supervisory group ensures continuous advice throughout the data collection, analysis and research reporting processes. I am writing this letter as the main supervisor of Mr. Juma's doctoral studies and research.

Your collaboration is appreciated.
I will be ready to provide further information.

Sincerely,

Elina Lehtomäki
Adjunct Professor, Doctor in Education, Senior Researcher
Faculty of Education, University of Jyväskylä, Finland
Email: elina.k.lehtomaki@jyu.fi
Tel. +358 40 6896456

APPENDIX V : RESEARCH PERMIT – ZANZIBAR RESEARCH COMMITTEE



REVOLUTIONARY GOVERNMENT OF ZANZIBAR

SECRETARY
ZANZIBAR RESEARCH COMMITTEE
P. O Box 239
Tel: 2230806
FAX: 2233788

RESEARCH/FILMING PERMIT
(This Permit is only Applicable in Zanzibar for a duration specified)

SECTION

Name:	SAID K. JUMA
Date and Place of Birth	16.01.1969
Nationality:	TANZANIAN
Passport Number:	AB198693
Date and Place of Issue	2007 ZANZIBAR
Date of arrival in Zanzibar	-
Duration of stay:	-
Research Tittles:	'INCLUSIVE EDICATION DEVELOPMENT IN ZANZIBAR"
Full address of Sponsor:	P.O. BOX 146, ZANZIBAR

This is to endorse that I have received and duly considered applicant's request I am satisfied with the descriptions outlined above.

Name of the authorizing officer:	MWANAISHA A. KHAMIS
Signature and seal:	
Institution:	Office of Chief Government Statistician
Address:	P. O Box 2321 Zanzibar.
Date:	26/03/2015

OFFICE OF THE CHIEF GOVERNMENT STATISTICIAN
S. M. Z
P.O. Box 2321
ZANZIBAR

APPENDIX VI: SAMPLE OF INITIAL/PRELIMINARY CODING OF THE INTERVIEW DATA FOR PRIMARY SCHOOL B

EXCERPTS	INITIAL CODES	LOCATION
Because of... time those in section one worked together and those in section two worked together, but later [Section one = Standards I to III, Section two = Standard IV to VII]	Team work	T1B p.1 Line 16–17
we then did [the research] together.	Team work	T1M p.1 Line 21
it has helped pup…teachers to know, this pupil has this [problem] and that pupil has…	Contribution of AR to IE: Teacher-pupil interaction	T1M p.2 Line 37-38
because we could bring back those- the stubborn ones… We now have those. As for the rest we are gradually moving with them. We are thankful…that all those, stubborn ones, we now have them [at school].	Contribution of AR to IE: improving access	T1B p.2 Line 48-50
because we could bring back those- the stubborn ones…We now have those. As for the rest we are gradually moving with them. We are thankful…that all those, stubborn ones, we now have them [at school].	Success: Improving attendance	T1B p.2 Line 48-50
but the challenge is on time	Time consuming	T1B p.3 Line 64
Ha ha ha Time. We have already got the content it’s time…	Time consuming	T1B p.3 Line 72
Then to convince The parents to recognize what is the importance of education.	Parental support to teachers	T1B p.4 Line 93-94
So, they will all be attentive knowing that…	Improving pupils attention to the lesson	T1B p.4 Line 100
So that they can also learn like this. Lest they should see that this task [of conducting action research] is only for those in the …[team] whilst every teacher has a responsibility	Collaboration	T1B p.4 Line 113-115
So that they can also learn like this. Lest they should see that this task [of conducting action research] is only for those in the …[team] whilst every teacher has a responsibility of…	Importance of whole school approach for training	T1B p. 4 Line 113-115
We normally can’t meet the deadline.	Time Consuming	T1B p. 4. 122-123
it’s just a consensus that let us use this time or come during holidays or after working hours.	Team Work	T1B p. 5 Line 136-137

I've learnt that [to address] anything [any problem/challenge] first needs investigation in order to know that after doing investigation you will come to know how you should solve it.	Learning Research skills	T1B p. 5 Line 141-143
all teachers to be given [training on] inclusive education.	Teacher training for inclusion	T1B p. 5 Line 156-157
Therefore, section one was dealing with some of the pupils who are absent on Fridays and section two organized to follow up truant pupils over there.	Team work	T9B p.6 Line 177-178
My main responsibility was to follow up the parents of the children; you know usually women are afraid of contacting parents. So for each of the parents who was not called [or could not come] to the school, it was my responsibility to follow them to their homes and find out why the child is not attending school?	Team work	T9B p.6 Line 183-186
Actually. There are successes because there are some changes in the problems that we used to have for example absenteeism on Fridays to some extent has decreased as well as moving around [outside the classrooms or school] at the time of the lessons is somehow decreased now.	Success: improving attendance	T9B p.7 Line 192-195
Actually. there are successes because there are some changes in the problems that we used to have for example absenteeism on Fridays to some extent has decreased as well as moving around [outside the classrooms or school] at the time of the lessons is somehow decreased now.	Improving pupils' attendance	T9B p.7 Line 192-195
We reported them then we took the data to our colleagues in order to reach our intended goal.	Team Work	T9B p.7 Line 215-216
Because I think even their parents do not have disturbance any more from those children. They straightforwardly come to school [they do not sit down under the trees or staying outside the school during the lessons and make disturbance]	Success: Improving attendance	T8B p.8 Line 233-235
Because I think even their parents do not have disturbance any more from those children…They straightforwardly come to school [they do not sit down under the trees or staying outside the school during the lessons and make disturbance]	Improving pupils' attendance	T8B p.8 Line 233-235

ORIGINAL PAPERS

I

MOVING TOWARDS INCLUSION: HOW ZANZIBAR SUCCEEDS IN TRANSFORMING ITS EDUCATION SYSTEM

by

Juma, S. & Lehtomäki, E. (2016).

International Journal of Inclusive Education, *20* (6), 673—684.

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INTERNATIONAL JOURNAL OF INCLUSIVE EDUCATION, 2015
http://dx.doi.org/10.1080/13603116.2015.1111442

Moving towards inclusion: how Zanzibar succeeds in transforming its education system?

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ABSTRACT

Ever since the proclamation of the *Salamanca Statement* (1994) and the *Dakar Framework for Action* (2000), several countries across the globe have been improving their education systems making remarkable efforts towards inclusion. Furthermore, the *Muscat Agreement* (2014) proposes a global goal and targets for education post-2015. The goal envisages equitable inclusive quality education and lifelong learning for all by 2030. This article inquires how Zanzibar, a semi-autonomous part of Tanzania along the East African coast, started to transform its education system in an attempt to make it inclusive. First, the commitment to and process towards Inclusive Education (IE) is described in the time frame of changes in education. Second, thematic analysis is conducted to examine the contextualisation and definition of the concept of IE, the introduction of relevant legislation, introduction of *Inclusive and Learner Friendly Education Policy*, and the support provided for teachers to implement IE practices in the classrooms. Finally, the IE development in Zanzibar is compared to similar processes in sub-Saharan Africa.

ARTICLE HISTORY
Received 29 October 2014
Accepted 1 October 2015

KEYWORDS
Inclusive education; inclusive and learner-friendly education policy; education system; Zanzibar; Tanzania; Africa

Introduction

Inclusive Education (IE), according to Mariga, McConkey, and Myezwa (2014), is perceived as being practically challenging in low-income countries like those in sub-Saharan Africa (SSA). In 2011, nearly 30 million children in SSA were not attending school at all and over half of those children who attended primary school did not learn the basic reading and writing skills by grade four (UNESCO 2013, 2014). Some of those countries which have succeeded in improving both access and participation in primary education have introduced national laws , policies, and strategies for IE in order to enhance the quality of their education systems (Bines and Lei 2011; Rieser 2012; Kiuppis and Hausstätter 2014). This study inquires how Zanzibar in East Africa became committed to and started to transform its education system to be inclusive. First, theoretical grounding, the commitment to and process towards IE, definitions and legislation are described in a time frame. Secondly, content analysis is applied to examine official documents and reports to show how the concept of IE was contextualised and defined, and how key national and international actors contributed to the process. Finally, the IE development in Zanzibar is compared to similar processes in SSA.

Theoretical grounding of IE in Zanzibar

IE is a relatively new concept in the education system of Zanzibar. The premise of IE in Zanzibar is based on the principle that all children regardless of their differences have equal right to free

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education. After the revolution of Zanzibar in 1964, education was proclaimed 'free'. Since then, there have been attempts to improve issues of access, equity, and quality (MoEVT 2006). The 1991 Zanzibar education policy was reformed in 2006 to incorporate international conventions and declarations such as the 1990 Jomtien Declaration, Education for All (EFA), and the 1994 World Conference on Special Needs Education, Access, and Quality (MoEVT 2006).

In line with the EFA goals, the *Salamanca Statement* and Framework of Action on Special Needs Education call for the promotion of IE, Zanzibar introduced IE in its education system whereby all children are expected to attend a school closer to their home. In addition, the 2006 education policy reforms included a new structure of formal education system. The structure of formal education system consists of five levels, namely: (1) Two years of pre-primary education, (2) Six years of primary education, (3) four years of ordinary level secondary education (4) Two years of advanced secondary education, and (5) A minimum of three years of higher education (MoEVT 2006).

The starting point for this inquiry on changes in education in Zanzibar is the period after the Zanzibar Revolution in 1964, when education was declared free of charge to all Zanzibaris, irrespective of their races, religions, tribes, socio-economic status, disabilities, or gender (MoEVT 2006; Legal and Human Rights Centre 2013). In 1988, the Ministry of Education formed a Special Education Unit within the Ministry to offer educational services to children with disabilities in an endeavour to make sure that no child in Zanzibar was denied their right to education. In some schools, special units were introduced and became operational from 1991. By 2014, there were nine special units: six for children with developmental disabilities, two for children with hearing impairments and one for children with visual impairments (MoEVT 2013).

The origin of IE in Zanzibar can be traced back to the early 2000s as a result of a visit to Lesotho made by the Ministry of Education and Culture officials. During the visit, the Zanzibar delegation was inspired by the implementation of inclusion in Lesotho schools. In 2004, an IE project, funded by the Norwegian Association for Persons with Developmental Disabilities (in Norwegian: *Norsk Forbund for Utviklingshemmede*, NFU) and Operation Day's Work (ODW), was introduced. The Ministry of Education and Vocational Training (MoEVT) and the Zanzibar Association for People with Developmental Disabilities (ZAPDD) have been collaborating with national and international partners such as Ministry of Health, Department of Disability Affairs in the First vice-President's Office, NFU, and Sight Savers International to run the project. The aim of this project was to ensure that learners with special educational needs had access to education. The project began with 20 schools and by 2014, it had reached 119 schools (MoEVT 2013/2013/2014).

Although IE was formally introduced as a pilot project in 2004, previous work and the role of the civil society organisations and some disability activists cannot be undermined. The formation of the Zanzibar Association of the Disabled (ZAD) in 1981 in particular, and other disability-based organisations in general, contributed much to the genesis of IE practices in Zanzibar. ZAD, which was officially registered in 1985, was led by an influential and long-serving schoolteacher and disability activist, *Maalim* Khalfan H. Khalfan, who played a considerable role in advocating for the rights of people with disabilities in Zanzibar. Being physically disabled and educated, *Maalim* Khalfan significantly contributed to convincing parents to send children with disabilities to school. He was also active in influencing national policies related to disability, community outreach programmes, and advocacy for the rights of people with disabilities, including the children's right to education (Non-governmental Organisation Resource Centre and Tanzania Association of Non-governmental Organisations 2008).

In 2014, a decade after the first project, the MoEVT further showed its commitment to IE by adapting UNESCO's recommendations in the *Salamanca Statement* to the context of Zanzibar:

> … schools should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions. This should include disabled and gifted children, street and working children, children from remote or nomadic populations, children from linguistic, ethnic, or cultural minorities and children from other disadvantaged or marginalised areas or groups. (UNESCO 1994, 6)

In the following sections, we discuss the education system's transformation, starting from IE policy definition. The justifications and terms used are analysed with references to literature and research on IE. The relevant documents such as *The Zanzibar Education Policy* (2006), *Inclusive and Learner Friendly Education Policy* (ILFEP) (2013 draft), were obtained from the MoEVT's office. A search for relevant literature was done via several electronic databases such as ERIC and PsychINF. Also, Google and Google Scholar search engines were used to find publications and reports related to IE development, especially in SSA. Key words used during the search included 'inclusive education', 'inclusion' and 'inclusive education policy'. The initial round of the selection included 90 documents. To suit the purpose of this study, the documents that did not address the IE development were excluded. Thematic analysis (Braun and Clarke 2006) was applied to analyse contents of the documents. The units of analysis were key themes representing the phenomenon under study. The themes included: 'rationale behind IE', 'policies and legislations for IE', and 'historical development of IE'. Only sections related to the study were used as context units. The main issues were identified from the sections. By using a set of themes, each document was classified according to the sub-categories such as definition of IE, policies supporting IE, key actors for the development of IE, and teacher training for IE. After coding the materials, themes were developed and finally the information was interpreted.

Defining IE in the context of Zanzibar

MoEVT (2013/2014) defines IE in its ILFEP draft as 'education where all learners study together with other learners of their age in their community, irrespective of their abilities or disabilities, socio-economic background, ethnic background, language, cultural background, religion or gender'. IE is described in the policy as based on the right of all learners to receive a quality education that meets basic learning needs and enriches the learners' lives. This policy definition encompasses a wide range of learners who might be excluded from or within education due to factors other than impairment. These learners include, among others, those who are involved in child labour, those affected by HIV or AIDS, learners who are gifted or talented and learners who have dropped out of school for various reasons. The definition denotes a social and rights-based approach which encompasses a wide range of learners at an increased risk of being excluded; for instance, schoolgirls who become pregnant and children with disabilities. The rights-based approach is founded on the three key principles of access, quality, and equality (see also Tomaševski 2004; UNESCO 2005).

Such a wider policy-level definition is crucial in guiding the implementation of IE. Previous studies (D'Allesio and Watkins 2009; Ainscow and Sandill 2010; Rix et al. 2013; Kiuppis and Hausstätter 2014) have shown that in some countries, IE is still thought of as an approach for serving learners with disabilities within the general education system. To perceive IE as merely focusing on disability, Booth (2011) argues, is an exclusionary process. IE is rather, a never-ending process to eradicate all exclusionary sources within education and society at large.

The formulation of ILFEP signposts the commitment of the Zanzibar government towards creating an inclusive, learning-friendly environment which supports, fosters, and educates all children, regardless of their gender, physical, intellectual, social, religious, racial, linguistic, or other characteristics. The development of the policy also marks the beginning of a long road towards viewing education through an inclusive lens, which infers a move from seeing the child as a problem to seeing the education system and all other systems that may impede learning as a problem (UNESCO 2005).

The Zanzibar Education Policy (2006) statements regarding IE are: (1) IE shall be promoted to ensure that children with special needs get equal opportunities, barriers to learning are addressed and the diverse range of learning needs are accommodated; (2) Slow learners and highly gifted children shall be identified and be given opportunities to learn at their own pace; and (3) Children with disabilities and others with special needs shall, to the greatest extent possible, be able to attend a local school where they will receive quality education alongside their peers without disabilities/special needs.

To put the above statements in practice, the policy outlines a number of strategies for implementation of IE: early identification and intervention for children with special needs; mainstreaming IE in teacher professional development programmes; creating mechanisms for facilitating involvement and participation of people with disabilities in matters affecting their lives; and establishing teachers' resource centres.

Legislations and policies supporting IE

Several policies and pieces of legislation related to the rights of people with disabilities and other marginalised groups have been enacted in Zanzibar. These policies and legislations (summarised in Table 1) make an important step towards the realisation of EFA. Although such policies which address the rights of people with disabilities have been formulated, Bines and Lei (2011) contend that disability still remains a challenge towards inclusion in many countries because of stigmatisation and a negative attitude to people with disabilities.

How IE is organised in Zanzibar schools?

In practice, Zanzibar's model of IE can be described as 'inclusive special education', which, according to Hornby (2012), involves having most learners in mainstream classrooms and a few special classes integrated in schools. According to ILFEP, special units will continue to exist within some schools and enrol students with special needs if necessary, including those with severe and complex disabilities:

> All learners shall be enrolled in the pre-primary and primary schools closest to their homes. Under unavoidable circumstances, some learners shall be enrolled in neighbouring schools with Special units rather than schools without special units … learners with severe and complex disabilities shall, for the time being, attend classes in special units. (MoEVT 2013/2014, 44)

The students enrolled in the special units will also spend some time in the regular class activities and interact with other students. The policy describes a special unit as:

> … a classroom or a set of facilities in a regular school set aside for use in the provision of special education services. Within these special units learners with severe disabilities or challenges can receive support and teaching within a smaller group with a specially trained teacher who is able to adapt activities to learners' individual needs. (MoEVT 2013/2014s, vi)

Table 1. Legislations and policies supporting IE development in Zanzibar.

Year	Legislation	Focus	Responsible authority (duty-bearer)
1997	Zanzibar Labour Act (No. 3)	Fundamental rights concerning the employment of people with disabilities	Government, employers
2000	Zanzibar Vision 2020	Equal opportunities for orphans, people with disabilities and other disadvantaged groups in every aspect of social, economic, and cultural life in Zanzibar	MoEVT, community
2004	Zanzibar Disability Development Policy	Protection of the rights of people with disabilities, including the right to education	MoEVT, education providers
2005	Labour Relations Act (No. 1)	Protection of discrimination based on disability in the context of Trade Unions' constitutions or activities	Trade unions, employers
2006	The Persons with Disabilities (Rights and Privileges) Act (No. 9)	Rights and privileges for people with disabilities, Established Zanzibar National Council for Persons with Disabilities	Government, employers
2006–2010	The Zanzibar Strategy for Growth and Reduction of Poverty	Equal access to EFA, encouraging enrolment in schools and CBR for children with disabilities	MoEVT, schools, community
2006	The Zanzibar Education Policy	Provision of framework for full realisation of educational potential of all children, including those with special educational needs	MoEVT, community

Table 2. Key actors in the development of IE in Zanzibar.

Key actors	Contribution
NFU, ODW, Norwegian Agency for Development Cooperation (NORAD), Aga Khan Foundation, United States Agency for International Development (USAID)	Funding of IE project, conducting evaluation and provision of technical support for improvement of the project
ZAPDD	Running of IE project with MoEVT, advocacy, sensitisation meetings, awareness seminars and running youth activities related to inclusion
MoEVT	Recognition of IE in its 2006 *Education Policy*, coordination of IE through its *IELS Unit*
Local NGOs, Disabled People's Organisations (DPOs)	Advocacy, support to respective target groups, and influence of government policy on disability issues including education
Department of Social Welfare	Mainstreaming disability issues in various sectors including education
Zanzibar Muslim Academy	Establishment of *Certificate in Inclusive Education* programme for in-service teacher trainees
Ministry of Health and Social Welfare, Sight Savers International	Provision of health specialists to join early intervention and assessment committee
State University of Zanzibar	Establishment of *Diploma in Inclusive and Special Needs Education* programme for pre- and in-service teacher trainees

The policy shows a clear indication of changing the focus from the naïve view that IE is only focusing on children with disabilities to a wider perspective as an approach towards overall quality education and removal of barriers to educational attainment (UNESCO 2003; Rieser 2012). Slee (2011) adds to this point by arguing that IE is 'not just about educating disabled children and adults, it is *everybody's business*'.

Since 2004, various international and national organisations have been working with the Zanzibar MoEVT and ZAPDD towards the development of IE. Based on data from the Inclusive Education and Life Skills Unit (IELS Unit), Table 2 summarises the key actors on IE development in Zanzibar. The Norwegian Association of Persons with Developmental Disabilities (NFU) has been one of the key international development partners to give significant contributions. It financially supported the introduction of the IE pilot project from 2004 to 2006. Then, a long-term plan was signed (2010–2014) between the NFU, MoEVT, and ZAPDD. The focus of the plan was to introduce IE to all schools in Zanzibar and ensure access to quality education for learners with special educational needs (NFU 2014).

According to the National Bureau of Statistics (2008), the percentage of people with disabilities (aged seven and above) in the Zanzibari population was 9.3%. Out of this percentage, data from

Table 3. Number of students with disabilities enrolled in government primary and secondary schools, 2010–2013.

	2010	2011	2012	2013
Primary schools				
Visual impairment	887	881	796	911
Physical impairment	512	550	545	527
Hearing impairment	979	1085	806	865
Speech impairment	332	593	434	408
Intellectual impairment	533	378	382	360
Multiple disabilities	157	194	263	199
Total	3400	3681	3226	3270
Secondary schools				
Visual impairment	685	711	1097	665
Physical impairment	170	160	151	173
Hearing impairment	215	191	208	186
Speech impairment	100	122	138	86
Intellectual impairment	44	27	30	36
Multiple disabilities	38	149	225	80
Total	1252	1360	1849	1226

Source: Zanzibar MoEVT Budget Speech (2013/2014).

Table 4. Number and percentage of government schools reported as implementing IE in Zanzibar by district.

District	Number of schools	Number of inclusive schools	% of inclusive schools
Urban	39	13	33.3
West	62	20	32.3
North A	47	6	12.8
North B	29	10	34.5
Central	48	6	12.5
South	28	12	42.9
Micheweni	36	6	16.7
Wete	48	19	39.6
Chake Chake ke	44	14	31.8
Mkoani	45	13	28.9
Total	426	119	27.9

Source: Zanzibar MoEVT *Budget Speech* (2013/2014).

the MoEVT *Budget Speech* (2013/2014) indicate that learners with (physical, intellectual, visual, and hearing) disabilities constitute 1.8% of the total enrolment in public pre-primary schools, 1.3% of the total enrolment in public primary schools and 1.7% of the total enrolment in public secondary schools. For private schools, most of which were introduced after the 2000s, learners with disabilities comprised 1.3% of the total enrolment in pre-primary schools, 0.5% of the total enrolment in primary schools and 2.9% of secondary school enrolment. Data in Table 3 indicate the number of students with disabilities that were enrolled in primary and secondary schools from 2010 to 2013.

In terms of the percentage of schools implementing IE, a closer look at the data in Table 4 indicates that nearly 28% of the government schools are in the IE project. With limited funding and resources, it is rational to start with a smaller number of schools and then strategically include more schools, rather than trying to reach all schools at once with a superficial focus on IE practices (NFU 2014).

Implementation of IE in Zanzibar

For effective implementation of the IE, two committees were created in 2004, drawing members from various sectors such as education, health, and local government. Each school implementing the IE project formed an IE committee. These committees have significantly contributed to IE development in Zanzibar. They contribute to raise awareness among the community members on the right to education for all children including the most vulnerable ones such as those with disabilities. More outstandingly, the school committees have been bridging the schools with the community through encouraging a wider support network for inclusion (McConkey and Mariga 2011). For example, the school IE committees convince community members to donate materials and to volunteer labour power in the construction of new classrooms and improve school infrastructure to become more learner-friendly (McConkey and Mariga 2011). Table 5 summarises the membership and core functions of the committees.

Table 5. Formation of IE committees according to IELS Unit Zanzibar.

Committee	Members	Function/focus
Steering Committee	MoEVT, Ministry of Health and Social Welfare, Ministry of Employment, Women and Children's Development, Disabled People's Organisations	Planning and collaboration
Technical Committee	MoEVT, ZAPDD, Ministry of Health and Social Welfare, Ministry of Employment, Women and Children's Development, Teachers' Union, Zanzibar Madrasa Resource Centre, Labour Commission	Carrying out assessment of children for proper placement and rehabilitation of school environment
School Inclusive Education Committee	Parents, members from school committees, head teachers, learners with and without disabilities	Implementation of IE at school level

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McConkey and Mariga (2011) have identified four main themes which have been fundamental in the early development of IE in Zanzibar: parents, community, school, and Community-Based Rehabilitation (CBR). Some parents, especially of children with disabilities, have been active members of the committees formed in schools. They have played a great role of awareness and sensitisation in the community (McConkey and Mariga 2011). At the community level, local government leaders, called *shehas*, have been influential in liaising between the central government programmes and the community. They are involved in influencing community sensitisation and awareness towards building an inclusive society through the provision of the right to EFA. Health specialists have also been playing a key role in providing CBR and health services. CBR can be an essential initiative in pushing for social inclusion and instilling positive attitudes towards people with disabilities, especially children, by encouraging participation of the family and the community. Through CBR and IE, people with disabilities (including children) can be empowered to have equal access to social services such as education, health and employment. For example, CBR workers may collaborate with parents and community leaders to identify children with disabilities (who are not in schools) and send them to school. Likewise, teachers can refer learners with disabilities to CBR workers for vocational placements and other community services (Hartley et al. 2005).

The IELS Unit has begun extending IE training to private and pre-schools schools, which were not included in the IE project (NFU 2014). This article posits that although it is axiomatic that a majority of the students in private schools are those from relatively middle-income and higher socio-economic status families, it does not necessarily imply that there are no students who are excluded in one way or another. The teaching staff in these schools also need orientation to IE pedagogies, particularly related to what kind of changes are needed in order to be inclusive schools. Such changes require the capacity development for teachers and other school staff to positively respond to learner diversity. Diversities among learners must not be perceived as problems but should be considered as rich learning opportunities to stimulate thinking and learning within the classroom community (Kiuppis and Hausstätter 2014). It is not enough to be satisfied with the fact that learners with disabilities or any others with special educational needs are enrolled in schools. What matters most is what happens to these learners when they are at school. Are the teachers aware of the inclusive practices that ensure the meaningful presence, participation, and achievement of all learners in the classroom? There is a pressing need to go beyond enrolment and sensitisation now.

Another crucial issue for the immediate need to extend IE training to private schools is the fact that a majority of these schools claim that they are English-medium. This poses another threat to inclusion. The use of English as the language of instruction (LoI), which is hardly used by 5% of Zanzibari residents (Babaci-Wilhite 2013), leaves much to be desired. Despite a plethora of scientific evidence showing that teaching students in a language they understand better, especially when it is the mother tongue, improves the quality of knowledge acquisition and education in general (Babaci-Wilhilte 2013; Rea-Dickins and Yu 2013), the 2006 Zanzibar Education Policy reforms replaced Kiswahili (the mother tongue of the overwhelming majority in Zanzibar) with English as the LoI in mathematics and science subjects in Standard V and VI, which are the last two years of primary school (MoEVT 2006). We are contending that using English in Zanzibar as the LoI may exacerbate the quality of education rather than being a *magic bullet* as the educational authorities might have thought. This policy reform may have serious implications to active participation and achievement of learners in classroom learning, and thereby affect inclusion.

Training teachers for IE

Pre- and in-service teacher training programmes for IE are crucial. With limited resources but strong determination, the IELS Unit, in collaboration with international development partners such as NFU, began with in-service teacher training to respond to the immediate need to start to implement IE practices. For convenience, two teachers from each of the 20 IE project pilot schools were appointed for short training (between one and three weeks) on the theory, concepts, and

international perspectives on IE, in Tanzania and other neighbouring countries, including Uganda and South Africa (McConckey and Mariga 2011). After the training, these teachers worked together with the IELS Unit and the Ministry of Health and Social Welfare to run in-service training workshops for other teachers and schools, which lasted between one and three weeks. The content in the workshops included the concept of IE, Article 24 of the UN Convention on the Rights of People with Disabilities, the Salamanca Statement of Action, Braille, sign language, early identification and assessment, behaviour modification, development of Individualised Education Plans, and improvisation of teaching and learning materials from locally available resources. The teachers who attended the workshops were then expected to convey the knowledge and experiences to their colleagues in their respective schools. Notably, however, the topics covered within one to three weeks were too many. It was practically difficult for the workshop participants to pass on all the information gained at the training to other teachers (NFU 2014). Due to the limitations of this cascade model, the whole-school approach was then adopted to provide training to all the teachers present in the school, rather than training only a few. A school-based approach can help to make all teachers available in the school responsible for all learners and avoid the tendency of leaving the responsibility of supporting learners who need additional support only to the few teachers who received IE training. In addition, certificate and diploma courses on IE have been introduced at the Zanzibar Muslim Academy (since 2006) and the State University of Zanzibar (since 2013), respectively. However, for more sustainable implementation of IE, there is a need to rethink the IE training model in Zanzibar. Advocacy for IE to be embedded or permeated in the pre-service teacher training is now strongly needed instead of relying solely on one-off basic training on IE through workshops and short training (Rieser 2012; NFU 2014).

IE practices in Zanzibar in the context of SSA

Zanzibar is on par with other SSA countries towards implementation of the UN *Convention on the Elimination of All Forms of Discrimination against Women* (CEDAW) and the *Convention of the Rights of Children* (CRC) by introducing a re-entry policy for schoolgirls who become pregnant (MoEVT 2006). Other African countries with similar policies include Kenya, Malawi, Zambia, Botswana, and Zimbabwe (Chilisa 2002). The re-entry policy will provide invaluable support towards access and participation for female students. Unterhalter (2013) and Chilisa (2002) conducted studies on the expulsion, re-entry, and continuation policies regarding girls who fall pregnant while at school. Both these studies contend that even those countries with re-entry policies are violating the children's rights to education through the temporary exclusion of pregnant girls from school once the pregnancy is discovered. Girls' education and gender equality have been on the policy agenda in both Zanzibar and Tanzania (MoEVT 2006).

Our stance is in favour of the re-entry policy, which denotes a change towards a more inclusive attitude, as it gives opportunity for pregnant schoolgirls to resume studies after delivery. While permanent expulsion of pregnant schoolgirls is too castigatory, continuation is too lenient and does not reflect the sociocultural context of Zanzibar where pre-marital and out-of-marriage-bond pregnancies are vehemently perceived as immoral, disgraceful, and sacrilegious. Continuation policies, which allow the pregnant schoolgirls to continue attending school during the pregnancy period, may represent an oversight regarding the psychological comfort, care, and support needed during pregnancy for the best interests of the expecting mother, especially in this context where the girl faces social stigma and isolation from the family, and even rejection from the man responsible for pregnancy (Legal and Human Rights Centre 2013).

The 1967 Arusha Declaration, which was followed by nationalisation of private investments and promulgation of socialism and self-reliance philosophies-cum-policy, can be viewed as one of the initial steps towards EFA in Tanzania. The 1978 Education Act made primary education compulsory, yet not free. In 1998, an IE pilot project was introduced. The project was carried out by the MoEVT in collaboration with UNESCO and Salvation Army. The project began with four schools

in the Temeke District, Dar es Salaam, and the number of schools increased up to 196 by 2010 (Thomas 2013). A major step towards expansion of access and participation in basic education was the elimination of primary school fees in 2001. The formulation of the National Policy on Disability in 2004 helped to ensure the right to education for people with disabilities.

According to the survey conducted by Lehtomäki, Tuomi, and Matonya (2014), the concept and principles of IE in Tanzania are still unclear to the majority of teachers and parents, as well as to educational administrators and other educational stakeholders. In 2009, a National Strategy on IE 2009–2017 was introduced to enhance the implementation of IE. This strategy aims at achieving that: (1) education policies and programmes are informed by inclusive values and practices; (2) teaching and learning respond to the diverse needs of learners; (3) education support is available to all learners; and (4) community ownership of and participation in IE is enhanced.

Another strategy towards enhancing quality EFA in Tanzania is the Big Results Now (BRN), inaugurated in 2013. To implement BRN, the Tanzania MoEVT has interestingly decided to focus on increasing the pass rates in schools by officially introducing league tabling of school performance and competition as one of the initiatives to achieve improved quality of basic education. Thus, schools are ranked as high, medium, and low based on their performance in the annual nationwide examinations. However, ranking of schools and competition leave much for speculation with regard to quality of education (Slee 2011; Rogers 2012; Kuusilehto-Awale and Lahtero 2014). Parents may be in a dilemma as to which schools they should send their children. They may change schools year by year when 'shopping' for schools that are ranked high. This tendency may affect inclusion as some schools can reject children with disabilities, and those who are not academically good enough to enable the schools to get good performance in the national examinations.

In Uganda, the Danish International Development Agency has supported the government in the development of education for learners with disabilities since 1990. This was followed by the introduction of the Universal Primary Education Policy in 1997. However, the basic compulsory EFA in Uganda was provided under the Compulsory Education Act of 2008 (Rieser 2012). According to the Ministry of Education and Sports (MoES), Uganda launched its Special Needs and IE policy in 2011. The policy, among other objectives, aimed to increase enrolment, participation, and completion of schooling by persons with special learning needs. Furthermore, the MoES has grouped all the schools into clusters of 12 to 15 schools. Each cluster is managed by a special needs education coordinator who has also been trained on IE (Lynch et al. 2011). In Zanzibar, an almost similar structure was introduced in 2014. By using Teacher Centres (TCs), which were introduced in 1994 in all the 10 districts of Zanzibar, one IELS adviser has been recruited in all the TCs. These advisers who are assisted by Resource Teachers (RTs) are responsible to visit schools and give practical support to teachers on IE practices. Nevertheless, the TC advisers and RTs, who were recruited in 2014, need to be empowered through further training on IE because they are not adequately equipped with IE.

In South Africa, the adoption of the new constitution in 1996 paved the way for guaranteed EFA without racial or other forms of discrimination (Engelbrecht et al. 2013). The appointment of the National Committee on Special Education Needs and Training and of the National Committee on Education Support Service in 1996 was an indication of the government of South Africa towards inclusion of all learners, including those with disabilities. In 2001, the South African Department of Education released the Education White Paper 6, *Special Education, Building an IE and Training System*, which serves as a policy document guiding the provision of EFA learners. Since the release of the policy, several strategies have been put in place, including establishment of school-based and district-based support teams, as well as using the special schools as resource centres and the development of Strategy for Identification, Screening and Support in 2008. (Tshifura 2013).

Although each country has its own socio-economic, cultural and political context, Zanzibar and other SSA countries can still learn from each other in their efforts to transform their education systems towards inclusion. Thus, it is imperative for policy-makers in these countries to consider their own contexts and reality when developing IE policies and strategies. A wealth of research has indicated a wide variation of policies and practices regarding IE in both developed and developing

countries (Hornby 2012; Rix et al. 2013). Hornby (2012, 59) provides a caveat: 'It is important for developing countries not to attempt to adopt models for IE used in developed countries as these cannot be directly transferred because of political, social and economic differences … '

Conclusion: fundamental steps forward

In this article, we have discussed the steps taken by the Zanzibar government to transform its education system moving towards inclusion. Apart from those efforts, we maintain that it is equally crucial to include private and non-formal educational sectors in the IE development in Zanzibar in terms of training and other processes. For a realistic inclusion, there is a need to take a holistic approach towards inclusion by including formal and non-formal education as well as the public and the private educational sectors. UNESCO (2005, 16) accentuates the need to incorporate both private and public sectors: 'It is imperative, therefore, that education planners consider both the public and the private system in planning in order to effectively address the needs of *all* learners and combat exclusion.'

For a successful implementation of IE in Zanzibar, the policy objectives and strategies must be communicated to all stakeholders such as teachers, parents, educational officers and curriculum developers. In addition, a national strategy for the implementation of ILFEP needs to be put in place. Such a national strategy is needed to stipulate the role of each stakeholder in the implementation of ILFEP. It should also include monitoring and evaluation strategy in order to measure the results and impact of the policy. The government and its institutions, in collaboration with the community, must ensure that the principles of human rights related to education are enforced. Without concerted and adamant efforts, IE will remain a far-fetched dream. IE necessitates long-term, gradual reforms in all policies such as Youth development policy, Environment policy, and Social protection policy (not just those related to education), infrastructures and a change of attitudes (Du Plessis 2013). Also, the community's attitude towards education for girls, children with disabilities, children living with HIV/AIDS must be improved. Such a task requires a holistic approach which involves cross-sectoral planning involving all stakeholders for education, reforms and innovations towards improvement of the quality of teaching and learning (UNESCO 2009; Booth 2011). IE development is an evolutionary, rather than a revolutionary, process. It is indeed 'everybody's business' (Slee 2011; Rogers 2012) to minimise inequalities and exclusionary practices in education.

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II

SCAFFOLDING TEACHERS TO FOSTER INCLUSIVE PEDAGOGY AND PRESENCE THROUGH COLLABORATIVE ACTION RESEARCH

by

Juma, S., Lehtomäki, E., & Naukkarinen, A. (2017)

Educational Action Research, *25* (5), 720—736.

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EDUCATIONAL ACTION RESEARCH, 2017
http://dx.doi.org/10.1080/09650792.2016.1266957

Scaffolding teachers to foster inclusive pedagogy and presence through collaborative action research

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ABSTRACT

Teachers can be influential change agents in transforming their schools if they regularly reflect on their pedagogical practices, looking for improvements that will help all learners reach their full potential. However, in many sub-Saharan African countries, teachers seldom get an opportunity to collaboratively reflect on their practices. Action research, as an in-service professional development strategy, can be an ideal means of empowering teachers to collaboratively reflect on and improve their pedagogy to be more inclusive. Drawing from collaborative action research projects conducted by teachers in two primary schools in Zanzibar, Tanzania, this article explores the role of collaborative action research in developing the capacity of teachers to inform improvements in their pedagogical practices. The findings show how the participating teachers, with scaffolding influence from a critical friend (research facilitator), developed professionally along their zones of proximal development by promoting their pedagogical and research skills to enhance the presence, participation and achievement of all learners in their schools. Based on the findings, the article shows both the advantages and disadvantages of using collaborative action research in teacher professional development in the study context. The article also discusses the significance of organisational learning in in-service professional development in order to foster inclusive pedagogy through collaborative inquiry among teachers.

ARTICLE HISTORY
Received 23 June 2016
Accepted 7 November 2016

KEYWORDS
Collaborative action research; teacher professional development; inclusive education; scaffolding; organisational learning; Zanzibar

Introduction

In the more than 20 years since the Salamanca Statement (UNESCO 1994), the focus of inclusive education has moved from justification to implementation. The guiding principle of inclusive education – that all children, regardless of any perceived differences, such as (dis) ability, gender, religion, race and socioeconomic status, should attend their neighbourhood schools (UNESCO 1994) – has received currency worldwide (Forlin 2013; UNESCO 2015c). Although governments in both the Global North and the Global South are reforming their education systems to be more inclusive, research has shown that there is still a long way to go towards the realisation of presence, participation and achievement for all learners (Forlin

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2013) in sub-Saharan Africa (SSA). In this region, 29 million children are not in school, and 80 million who attend school are not learning the basic skills, thus contributing to global challenges in education (UNESCO 2014). Also, the 2015 Education for All Global Monitoring Report (UNESCO 2015a) indicates that no country in SSA achieved the measurable Education for All goals despite allocating the largest share (18.4%) of government expenditure to education of any region in the world.

The context of this study is one area in SSA: Zanzibar in Eastern Africa. Drawing from the perspectives of teachers in Zanzibar, the study serves as a contribution to the emerging body of literature on educational action research (AR) for inclusion in the context of SSA. The experiences reported in this article are derived from semi-structured interviews with 20 teachers, who learned about collaborative action research (CAR) by doing it with the help of a 'critical friend' – a research facilitator who helps novice researchers to begin their research projects, advises them how to proceed and promotes learning capacity of teacher-researchers through reflective practice skills (Stenhouse 1975). The article examines the contribution of CAR as a continuing professional development (CPD) strategy in empowering teachers to collaboratively reflect on and improve their practice to be more inclusive. The study aims to answer two questions: how does CAR, as a CPD option, foster teachers' pedagogy to be more inclusive; and what challenges do teachers face in their CAR projects?

Teachers in Zanzibar have little professional preparation for teaching learners with diverse learning needs and backgrounds. Apart from the policies and regulations on inclusive education, one of the greatest concerns for educational developers now is how to support the practising teachers to be more inclusive pedagogically. The obvious option is to train them through in-service professional development (PD) approaches. Yet what mode of in-service PD is most appropriate and sustainable? This area is crucial and worthy of attention because such PD initiatives will have a direct impact on improving learning for all learners (Florian and Pugach 2014). However, there has been a paucity of research in the SSA context on how teachers can be supported in making their pedagogical practices more inclusive. Inclusive pedagogy entails a change from teaching and learning approaches that work for most learners to those which involve 'the creation of a rich learning environment characterised by lessons and learning opportunities that are sufficiently made available to everyone so that all are able to participate in classroom life' (Florian and Linklater 2010, 370). Also, the literature on fostering contextually appropriate structural and organisational reforms in schools to support inclusive pedagogy has yet to be fully explored (Florian and Linklater 2010; Zollers, Ramanathan, and Yu 1999).

This article shows how CAR contributes to teachers' endeavours to transform their pedagogical practice to be more inclusive. CAR has been found to be an appropriate strategy for CPD because it increases teachers' self-efficacy (Mitchell, Reilly, and Logue 2009), innovation, collegiality and team-building skills (McLeskey, Waldron, and Redd 2014). Through this strategy, research becomes an approach that teachers use to inform their work situation and practice rather than merely being a topic they are trained in and then forget about. The latter situation is typically the case in the Zanzibar context.

This study is guided by the social constructivist theory of the zone of proximal development (Vygotsky 1978) and its scaffolding metaphor (Bruner 1983). Social constructivism, as a theory of learning, emphasises the social contexts of learning as well as hands-on and real-world experiences, such as AR. According to Vygotsky, we can distinguish between two

types of learning development: actual learning development; and potential learning development. The zone of proximal development, then, is 'the distance between the actual development level as determined by independent problem solving and the potential development as determined through problem solving under adult guidance or in collaboration with a more capable peer' (Vygotsky 1978, 86). This means the zone of proximal development assumes that the present level or actual development of the learner is enhanced to a higher level of cognition through increased interactions, involvement and collaboration or direction from a more-skilled person. The basic assumption underlying scaffolding is that, when learners are well supported in solving a problem, they will later manage to perform the task independently. Throughout the scaffolding process, there is a strategy of gradually withdrawing support so that learners can proceed to work independently. Although Vygotsky's work has focused on learning among children, research has shown that it is also applicable to learning among adults (Wennergren and Rönnerman 2006). Thus, individuals are better able to internalise new approaches and skills through collaboration with more skilled persons (Shabani, Khatib, and Ebadi 2010).

The study context: two primary schools in Zanzibar

This study was conducted in Zanzibar, a semi-autonomous part of Tanzania. The structure of Zanzibar's formal education system consists of two years of pre-primary schooling, six years of primary education, four years of secondary (ordinary level), two years of secondary (advanced level) and a minimum of three years of higher education (Figure 1). The entry age for the pre-primary level is four years; for the primary level, it is six years. Basic and compulsory education lasts for 12 years.

The minimum teacher qualification at the primary level is a certificate in education (corresponding to one year of teacher training). There are three kinds of in-service teacher training (MoEVT 2006): initial, which is intended for untrained primary teachers; upgrading, which is provided for qualified teachers either in short courses (between one and four weeks) or long courses (one or more years); and CPD, which is organised in the form of workshops and seminars usually conducted at teacher centres.

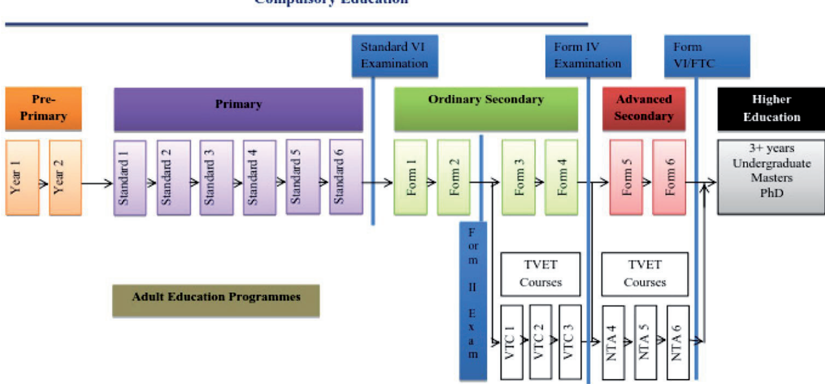

Figure 1. Structure of the education system in Zanzibar. Source: UNESCO (2015b).
FTC=Full Technician Certificate; TVET=Technical and Vocational Education and Training; VTC=Vocational Training Centre.

Inclusive education was introduced as a project in some government schools in 2004, and a 2013 evaluation of the project recommended the use of AR as a tool for empowering teachers to break down barriers to learning and, hence, increase the presence, participation and achievement of all learners (Juma and Lehtomäki 2015). The Ministry of Education and Vocational Training, through its Inclusive Education and Life Skills Unit, selected two schools, hereafter referred to as Primary School A and Primary School B, to pilot the project. Primary School A has about 1700 pupils with gender parity, and has about 50 teachers (91% female and 9% male). Within the school are 'special units' for pupils with disabilities. Primary School B has about 1200 pupils (46% girls and 54% boys) and about 30 teachers (97% female and 3% male). A unit for pupils with disabilities is integrated within the school. Both schools are urban public primary schools enrolling pupils from Standard (Grade) I to Standard VI. The schools operate in two shifts like many other schools in Zanzibar. The first shift lasts from 07:00 to 12:50 and the second from 13:00 to 17:55. The teachers work one shift per day, and the shifts alternate monthly. The following subjects are taught: Kiswahili; Arabic; English; Islamic religion; science; social science; mathematics; geography; physical education; vocational education; civic education; and information and communications technology. The language of instruction at the primary level is Kiswahili, except for mathematics and science which are taught in English beginning in Standard V (MoEVT 2006).

Method

In this research, AR was used because it is a methodology intended to have both action outcomes and research outcomes. We used it to support teachers in reflecting on and improving their practice. AR is a recursive process (Kemmis, McTaggart, and Nixon 2014; Stringer 2007). It is non-linear, consisting of a basic cycle of activities: identifying a general idea, engaging in inquiry, making a general plan, developing and implementing the first action step, evaluating and, finally, revising the general plan. A simplified model of this process, developed by Stringer (1996, 2007), consists of three steps: Look, Think and Act (Figure 2). In the 'Look' stage, the practitioners observe their situation to gain insight and collaboratively

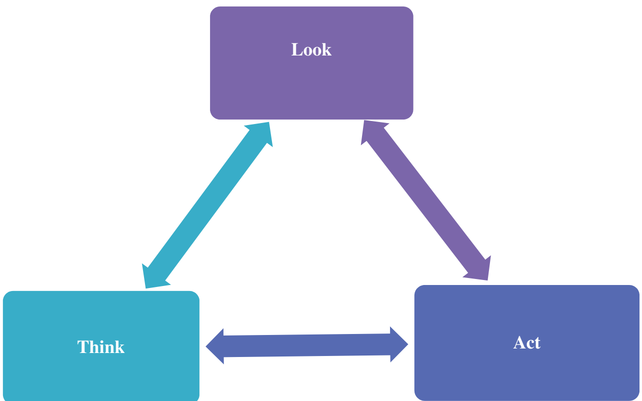

Figure 2. 'Look', 'Think' and 'Act' model. Source: adapted with permission from Stringer (1996, 2007).

prioritise an issue that they want to address or a problem they want to solve. They collect relevant information about the issue or problem and then define and describe the big picture (Stringer 2007). During the 'Think' cycle, the practitioners analyse and interpret the information gathered. This stage includes making recommendations about possible action or solutions regarding the issue being addressed. The 'Act' stage involves planning to implement the suggested solution based on analysis and interpretation, implementing the plan and evaluating the effectiveness of the action taken. These cycles are not simple and linear but complex, interdependent and overlapping.

Formation of the AR teams and the research project cycles

Ten teachers from each school participated, forming AR teams. For convenience, the Inclusive Education and Life Skills Unit recommended that at least one member of the team should be from the school administration. Hence, in both schools, either the head teacher or the deputy head teacher was in the AR team. The head teachers selected the rest of the participants based on the teachers' interest and willingness. Both teams attended three four-day workshops facilitated by the first author, the critical friend, in order to establish a common ground on AR theory and practice in the context of inclusive education. The workshops were interactive and the teachers learned the principles and practices of the AR data collection tools. They also learnt various ways of documenting AR findings (e.g. self-reflective diaries, diagrams, mind maps, AR walls, photographs and reports). The first author provided close support for the teachers to collect and analyse data and write reports for their first AR projects. After these capacity-building workshops and the start of the teachers' first AR projects, the researcher played a minimum role, gradually removing the scaffold to reduce its influence on the teachers when they embarked on their second AR projects. This strategy enabled the teams to work independently and enhance their skills, although the teachers sometimes contacted the researcher for guidance and support. In the last cycle of the project, the researcher and the teachers reflected on the process through one-on-one interviews (see Figure 3). This was not an easy process because the teachers experienced dilemmas and challenges during the process. The challenges that these teachers faced during the process are described in detail in the Findings section.

Data collection and analysis

Data were collected using both self-reflective diaries kept by the participating teachers and the researcher (the first author) and interviews with the participating teachers. The teachers' AR reports were also used to triangulate with data from other sources in order to enrich our understanding of the teachers' experience during the project (Bogdan and Biklen 2007; Braun and Clarke 2006). The interview data were transcribed verbatim in Kiswahili and translated into English. The translation was done to establish a common ground for all three authors to work on the same corpus of data. (One of them was not conversant with Kiswahili.) Before the analysis, all of the interviewees' personal details were removed.

The two authors who were conversant with the original language checked the translation and agreed that it generally represented the key ideas expressed by the interviewees. This step was useful because it enabled the researchers to be familiar with the depth and breadth of the data. The data were analysed using a qualitative thematic analysis reflecting guidelines

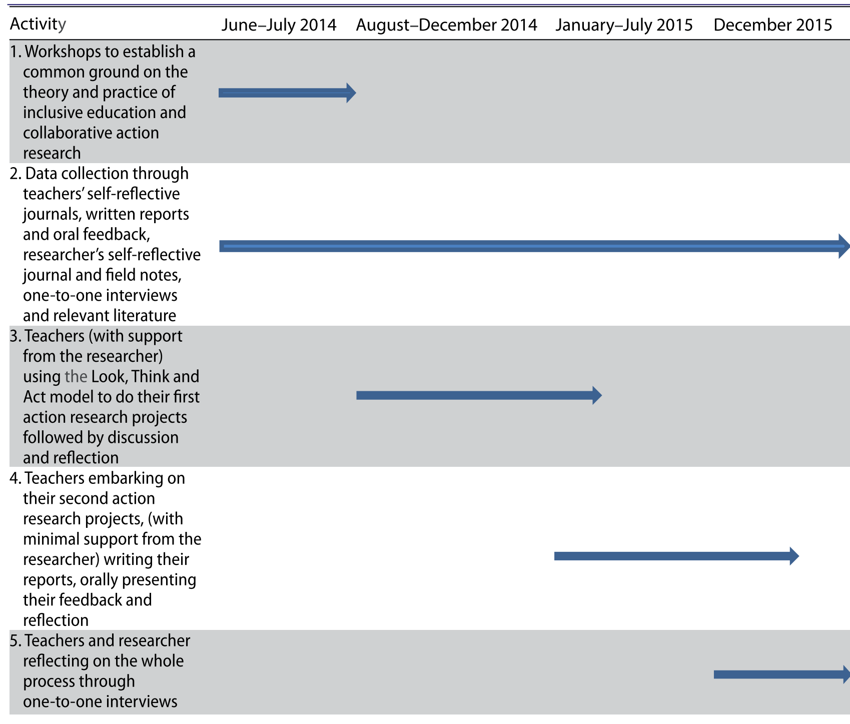

Figure 3. Activities and timelines of the research project.

from Braun and Clarke (2006) and Lichtman (2013). The interview transcripts were thoroughly reviewed; the authors read them three times to familiarise themselves with the data and to allow the themes related to the research questions to emerge. Initial coding was done throughout the transcripts. The unit for analysis was any chunk of the data (e.g. a single word, a phrase, a sentence or a paragraph) which was relevant to the research questions (Braun and Clarke 2006). This step produced 202 initial codes.

The second step involved revisiting the initial codes, whereby some of them were revised and their wording was refined. This step reduced the number of initial codes to 160. Then categories and a coding scheme were developed by merging some of the codes which seemed to be similar, after which the themes were compared, modified and confirmed. The third step involved searching for themes by collating similar codes into categories and sub-categories and then preparing a coding scheme. In the fourth step, the categories and sub-categories were reviewed to create themes. Finally, the themes were reviewed and discussed in relation to data and previous research.

Trustworthiness and ethics

To measure the trustworthiness of data in qualitative research, Guba (1981) recommends researchers use concepts such as credibility (in place of internal validity), transferability

(instead of external validity/generalisability), dependability (in place of reliability) and confirmability (rather than objectivity). In this study, transferability is presented through the provision of background data to show the study's context and provide a detailed description of the phenomenon in question, allowing the researcher to make comparisons. Dependability is achieved by employing triangulation: for example, by using more than one researcher to code the interview transcripts, thereby reducing the effect of investigator bias. Also, qualitative researchers use in-depth methodological descriptions so that, if necessary, the study could be replicated. Confirmability has been achieved through three types of triangulation (Denzin 1973): data, researcher and methodological triangulation.

Regular peer-debriefing was employed to minimise bias and ensure the recording of valid information. During the peer-debriefing sessions, the second and third authors in this study acted as impartial peers in their capacity as experienced researchers and doctoral research supervisors. They thoroughly examined and jointly discussed the data with the first author and provided constructive feedback and feed-forward. The materials examined during the regular supervisory meetings included interview transcripts (both in the original and translated versions), the first author's reflective journal and field notes, recorded interviews, photographs and informed consent forms.

To comply with research ethics, permission was sought from the schools' administration prior to the interviews. Before the interview, all of the AR team members were reminded about the purpose and the procedures of the interviews. All of the participants signed an informed consent form and gave their verbal consent for the recording of the interviews. To maintain confidentiality and anonymity, we have used codes (e.g. T1A and T1B) to refer to the teachers instead of their names. Also, we have referred to the two schools as Primary School A and Primary School B to conceal their identities.

Findings

After being guided in how to conduct CAR, the participating teachers embarked on their own AR projects with minimal support from the researcher. The AR team at Primary School A attempted to improve participation of all pupils in the classroom by helping their colleagues to create and use inclusive teaching and learning aids, including tactile materials. The team had identified a number of challenges, but they jointly prioritised this challenge for their project. They had observed that teachers rarely used such materials during lessons. Therefore, pupils' participation in the lessons was rather passive, especially pupils with visual impairment. The main reasons given by the observed teachers for not using learning aids in class were the financial inability of the school to purchase the materials and a lack of knowledge and skill in creating those materials. After discussing the matter with a sample of 17 of the observed teachers, the team agreed to facilitate training on how to create teaching and learning aids using locally available materials at low or no cost. They conducted two workshops during weekends. Facilitated by one of their experienced colleagues, the teachers learned how to create and use the materials effectively during their lessons.

At Primary School B, the AR team prioritised the problem of absenteeism on Fridays amongst their pupils. They agreed to investigate this issue through interviews with teachers, community leaders and parents. They also used focus group discussions with parents, teachers and pupils. Their findings showed the following: some pupils did not attend school on Fridays because they attended marriage ceremonies to get 'free lunch'; some teachers were

also absent on Fridays; Friday is a 'short' school day, so the pupils wanted to have a long weekend (consisting of Friday, Saturday and Sunday); and some parents/guardians would not let their children go to school on Friday because they wanted the children to look after their younger siblings while the parents/guardians attended marriage ceremonies. The team met and discussed the issue with the pupils, parents, school leadership, class teachers, community leaders and teacher-counsellors in the school.

To reflect on the whole process, the researcher conducted a face-to-face interview with each of the 20 teachers. Following the thematic data analysis of the interviews, a number of themes relevant to inclusive pedagogy, CAR and CPD were identified. The themes were categorised into five domains: teacher empowerment to support inclusion; collaboration and team work; improving pupils' attendance and active participation in the classroom; promoting positive social interactions; and challenges of conducting CAR. These themes are discussed within the two AR projects, elucidating each of the five themes. The findings illuminate how teachers managed to learn CAR by trying to do it, what professional benefit they believe they have received from CAR and the challenges they faced during the process. The teachers' quotes are used to support the analysis of the themes.

Teacher empowerment to support inclusion

The participants from both schools revealed that the AR process empowered them through knowledge and skills that are relevant in reflecting on and improving their practice. They learned basic research skills, problem-solving skills and ways of improving pupils' attendance and participation in the classroom:

> I'm a novice. It's just after coming to this school that I got to hear about action research. It has given us insight in solving the problems that we previously thought we couldn't solve. (T8B)

> There was one teacher during the morning assembly today who suggested that there was a need to sit together and think of how we can support these children to improve the way they read the supplication. So I think this could be action research as well. (T6A)

Collaboration and team work

Collaboration and team work explicitly emerged as a theme from both AR teams while the teachers were sharing their experiences during the interviews:

> We worked together to look for the existing challenges as to why we don't use the teaching and learning aids. Also, there was collaboration during the workshop when we made, together, the teaching and learning aids. We taught our colleagues, and we worked together to interview pupils and teachers. (T2A)

> We managed to do [AR] because it was not just one person or two. It's a team. We share our knowledge and experiences with other colleagues. (T7B)

Regarding the way they worked as a team, teachers recounted how they divided the roles amongst themselves:

> We met briefly as a team and shared the data. We decided to do it on Saturdays. [There is no school on Saturdays, i.e. the teachers devoted their personal time] Some made classroom observations, some interviewed the pupils and others interviewed teachers. There were other teachers who did both. I interviewed some pupils and observed classrooms. I mostly focused

> on pupils with special needs and asked them if they understood the lesson and how [they felt] when the teacher used teaching aids. (T6A)

> We had a chairperson and a secretary in our team […] we organized ourselves according to our sections. Section one collected data in the morning shift and section two in the afternoon. Then we would agree to meet and discuss [the data] together. It was just a consensus that we use this time [… we could also] come during holidays or after working hours. (T1B)

The participants learned from each other how to identify and include the children who need additional support in the classroom:

> I realized that the teacher did not even know that there are children with hearing impairment in this class [where the teacher also comes to teach]. She was then wondering how I identified them. I told her that I discovered them when I was going round the class asking questions to each child and checking their written work. I encouraged her [by saying] that she would be able to do that, if she was ready to learn how to do it, by being close to those children and learning from other teachers. (T9A)

Improving pupils' attendance and active participation in the classroom

The teachers at Primary School B were determined to improve their pupils' school attendance by reducing absenteeism on Fridays. They decided to focus on this project because they had identified it as one of their biggest challenges:

> It was actually a huge problem; you may find that in a class of 70 children, there are only 35 or 40 children [in attendance], so one could not teach. (T9B)

> There are some changes, though [they are] not that big. To some extent, our action research has reduced absenteeism on Fridays. And not just on Fridays; there are some who were not attending at all. But due to our research, there are some who have come back to school. They are now in the classrooms continuing with lessons. (T6B)

At Primary School A, teachers learned not only how to create tactile teaching aids but also how to use them so as to increase participation of all pupils in the classroom:

> [AR] helped me a lot because I didn't know [how to do these things] before. I used to just ask them, 'Do you know a cat?' They would go, 'Yees! We know it, it meows'. But is that enough for the blind children? Then I came to realise that they could *see* it through the tactile materials that we made. (T5A)

The use of tactile teaching aids helped the teachers to improve interest and participation of all pupils in the classroom, not just those with special educational needs:

> So, through action research, teachers learned how to make those teaching aids so that they can help all pupils to actively participate in the lessons. There are changes, and the children did enjoy the lessons. They are now actively participating and, also, their results were better because of active participation [in the lessons]. (T1A)

Promoting positive social interactions

The issue of increasing teacher–parent interactions and teacher–pupil interactions emerged at Primary School B. Teachers met parents at school and sometimes at the parents' homes. They discussed together how to reduce absenteeism amongst the pupils. The teachers also reported having increased positive interactions with pupils through their project:

> After getting this knowledge of action research, we have managed to resolve some of the minor problems, for example, the parents who were not co-operative with the teachers are now with us shoulder by shoulder. (T3B)

> […] it has helped us to know this pupil has this [problem] and that pupil has such-and-such problem. It has also enabled us to be closer to the pupils […] get to know them and their problems and get courage to address those problems. (T7B)

Challenges of conducting collaborative action research

Although this was the first time they had engaged in an AR project, the teachers in this study evaluated their project as having been successful. This is despite the challenges they faced, such as the time-consuming process, the heavy workload, the multiple roles they assumed and the lack of support. Moreover, they viewed AR as 'a double-edged sword'. While acknowledging its many professional benefits, they were worried that the progress of school tasks and routines, such as teaching, marking of pupils' work and lesson preparation, may somewhat deteriorate in the course of undertaking AR:

> [This is] because we do this task during the working hours when we are supposed to be teaching. Thus, we have to leave teaching and do this task and, when you do the other task [teaching], you miss this one [AR]. They are both important. We miss our lessons and other compulsory job responsibilities. (T5B)

Some of the participants in the study related their lack of time to conduct AR with their heavy teaching workloads and large classes:

> There are 40 periods per week, and I have to teach 39 periods. I have to mark about 140 scripts times two or even three, so my worry is that this task of marking pupils' examination scripts or exercise books will clash with action research. (T2B)

Apart from a heavy workload, some teachers claimed to have too many responsibilities both inside and outside of work, limiting their ability to participate in AR. One participant, for example, had teaching and administration tasks, studied part-time and also taught at a college. These teachers lamented that, during this project, they were required to use 'their time' to meet during weekends instead of being at home with their families:

> Sometimes, we had to work at the weekends, but sometimes, we have our own plans at home during the weekends, so it was a challenge to us. (T7A)

> We were mostly using our time. The school time was not enough. It was challenging because of clash with family responsibilities. (T2B)

Teachers from Primary School B also lamented the challenge of writing self-reflective journals and reports to document their AR activities:

> If action research did not involve writing about the activities and findings, it would be a very easy task. But you have to sit down and write it. It's good, but it disturbs us mostly [that we must spend time] writing. (T6B)

Also evident in the data is a lack of support from other colleagues who were not in the AR team. These colleagues were uncomfortable with being observed during, or interviewed on, their lessons:

> When you want to interview or observe them, they do not like it. They feel like you're spying on them in order to spot their mistakes and forward them to higher authorities. (T1A)

Discussion

The findings reveal how the teachers were empowered to improve their pedagogy, what they learnt from the project and what challenges they encountered. CAR is like a kaleidoscope (Pine 2009) because it empowers teachers to see new things from their own and other teachers' perspectives each time they engage in a CAR cycle. AR empowers teachers by pushing them out of their comfort zones, requiring them to assume roles, for example, as researchers and social change agents (Pantić and Florian 2015) rather than as agents preserving the status quo and business as usual. However, undertaking CAR for CPD has not previously been considered to be within the teachers' remit in Zanzibar. This situation explains why the teachers in this study lacked support from some of their colleagues, who felt that doing research was the responsibility of only the AR team members.

The finding about teachers being uncomfortable with peer observation and feedback implies the need for the teachers in Zanzibar to be exposed to the diverse models of co-teaching (e.g. supportive teaching, parallel teaching and team teaching) that appear to be effective within inclusive pedagogy. Although faced with a backlash from some teachers, co-teaching is useful for enhancing learning, professionally supporting teachers and promoting inclusion of all children (Rytivaara and Kershner 2012).

Education in Zanzibar, as in many other contexts in the SSA, is characterised by tightly centralised, examination-oriented curricula in which teachers are, in large part, expected to be curriculum deliverers with little flexibility. Summative assessments in the form of tests and examinations are given priority at the expense of learner-centred, formative assessment. Mixed with low motivation and limited CPD opportunities, teachers in Zanzibar find themselves constantly occupied, especially in the context of large classes and undesirable working conditions. They may not recognise the significance of engaging in collaborative practices such as CAR in improving their practice.

Edwards (2005, 176) argues that schools ought to operate as 'systems of distributed expertise' in which teachers learn from each other and from other professionals through 'relational agency' (Edwards 2010, 73) – a capacity to recognise and draw on the expertise of others inside and outside the school in order to enhance learning for all children. As Rouse (2009, 7) suggests, teachers require support through AR to stop asking 'What's wrong with the child?' and start asking 'What does the child need to support their learning?' Along the same lines, DuFour et al. (2004, 2) recommend shifting from 'What are we expected to teach?' to 'How will we know when each student has learned?' This pedagogical shift among teachers cannot, we argue, happen in a vacuum. It must be nurtured in an education system where teachers adapt to the diversity of children's needs and see themselves as reflective professionals who have confidence and scope for experimentation and change.

Increasing participation in the classroom is an important element of pupils' meaningful learning. In this study, the participants believed that they improved their pupils' participation by encouraging their colleagues to use inclusive teaching aids and supporting them in doing so. Of more importance is the need for teachers to be cognisant of and to accommodate their pupils' diverse learning needs. Inclusive pedagogy, therefore, demands instruction to be flexible and accessible for all learners. Teachers' materials for instruction and learning are effective if they reflect this diversity rather than being one-size-fits-all. Thus, one alternative is to train all teachers to improvise additional teaching and learning materials using cheap and locally available resources as done by the participants in this study.

The participants found that increased interaction with pupils and parents fostered pupils' presence, participation and achievement. It can also help to boost pupils' sense of self-esteem (Mitchell 2014). This argument is in line with Vygotsky's (1978) social constructivist theory, which maintains that learning takes place through the interactions students have with their peers, teachers and other experts in the learning environment.

Transformations in the structural and organisational culture in schools are also crucial. Policy and practice should work better together. To implement the Inclusive and Learner-friendly Education Policy in Zanzibar, it is essential to encourage and support teachers to work differently and reconsider their attitudes, beliefs and practices. The introduction of new policies and school regulations alone is not effective. The policies and school regulations will only be meaningful if accompanied by an organisational culture that nurtures teachers and school leaders, encouraging them to collaboratively reflect on and adapt their pedagogical practices to improve learning for all learners (Ainscow and Sandill 2010). In a similar study conducted on Tanzania's mainland – a context similar to that of Zanzibar – Mnyanyi (2014) suggests school-based CPD should be adopted in Tanzanian schools in order to empower teachers to improve their pedagogical practice and have an impact on their pupils' presence, participation and achievement.

As indicated in this study, the issue of collaboration and team work among teachers is crucial. No matter how skilled teachers are, if they work in isolation and rarely collaborate to improve their practice, their individual efforts tend to be less successful. Teachers' collaboration can considerably decrease isolation. In CAR, teachers jointly observe their situation, plan to take informed action to ameliorate undesirable situations and then critically reflect in and on their action. In this way, they can turn their schools into professional learning communities as they improve their classroom practices with a focus on learning for all (DuFour et al. 2010). Organisational learning – that is, prioritising learning for all members, fostering inquiry and sharing knowledge, skills and insights, as well as concentrating on staff relationships and democratic governance – can support staff in achieving self-fulfilment in their work (Collinson, Cook, and Conley 2006).

CAR promotes professional dialogue and, hence, contributes to the development of a supportive and reflective professional culture (Ado 2013) and identity (Kayaoglu 2015) among teachers. This situation can be achieved if teachers view their practice as a profession rather than a blue-collar job (Sagor 1992). In light of this view, Howes, Davies, and Fox (2009) propose that teachers see themselves as professional learners and a community of practitioners who learn with and from each other. Professionals with a sense of belonging to a learning community will not only ask themselves 'What do we need to know in order to improve?' but also 'How will we turn what we already know into action?' (DuFour et al. 2010, 17). When teachers work collaboratively rather than just cooperatively, they create the perception of 'by us, for us' rather than the boss ruling over the employees.

The challenges related to logistical and technical issues of conducting AR that were found in this study replicated those found in previous studies in different contexts. Knowles and Cole (1994) and Zeichner (2003), for example, found the following logistical challenges for teachers: getting substitutes when engaging in AR outside the school; and finding time to write in their AR reflective journals. Our study's findings are consistent with those of Cook (1998), who reported that teachers engaging in CAR find it challenging to document their findings.

In contexts with scarce financial resources, such as Zanzibar and many SSA countries, CAR can help to supplement the limited CPD opportunities for teachers and other educational practitioners (Makoelle 2014; O'Sullivan 2002). Research has shown that AR has a transformative potential (Wood 2012) and transformational action (Kemmis, McTaggart, and Nixon 2014) to contribute to improving a targeted situation. Thus, one way of supporting teachers is to provide them, in the framework of organisational learning (for example, Collinson, Cook, and Conley 2006; DuFour et al. 2010), with in-service PD through CAR as a tool to empower them with self-reflection and autonomy as well as problem-solving, team-working and innovating skills (Ioannidou-Koutselini and Patsalidou 2015; Mnyanyi 2009).

In this study, the teachers were empowered: they agreed on what needs to be changed and made decisions based on their AR findings while their critical friend was providing a scaffold where necessary. To some extent, the teachers managed to grasp the basic principles of conducting AR. Their self-reflective diaries, however, were not very well kept and very few items were recorded in them. The teachers prioritised familiarising themselves with the CAR process over the outcome. In both schools, it was encouraging to observe the teachers' spirit of sharing findings with their school communities. The report and teaching materials produced by Primary School A were shared with the teachers who did not participate in the project. At Primary School B, the findings were shared with the school committee, which includes parents, school leaders and local government leaders. Thus, after working for some time with a researcher who was a facilitator and a critical friend (scaffolding), the teachers in this study are expected to be inspired and to continue to reflect and investigate their own classroom practices without the support of a researcher. However, the sustainability of their initiatives depends on the support and encouragement they receive from the authorities, such as the Department of Teacher Education, the Inclusive Education and Life Skills Unit and teacher centres. The study findings imply that to further promote and sustain CAR in Zanzibar schools, close monitoring and evaluation is essential. If teachers, who rarely have spare time to do other things than teaching, are left alone without close follow-up and support, the sustainability of CAR in Zanzibar schools will remain very much in question.

An unexpected experience during the process was the efficiency of communications between the teachers and the researcher. At least three teachers from each school communicated with the researcher through emails and mobile phone applications, such as Imo, Viber and WhatsApp. This experience indicates the need for research to realise the potential of mobile learning to catalyse pedagogical transformations inside and outside the classroom (Kukulska-Hulme 2014). Because of the increasing accessibility of mobile phones among teachers, Traxler and Vosloo (2014) argue, mobile learning offers a crucial opportunity to enhance teacher PD in SSA. The potential of using mobile phones for teaching and learning purposes, especially among teachers, has also been explored through research conducted in Zanzibar (Shaame et al. 2015). Thus, this is a new area to tap to enhance learning among both teachers and pupils in Zanzibar as experienced in this study.

Participating in this study as a facilitator and a critical friend contributed to the first author's personal development and PD as a researcher, helping this author learn the value of interaction and of sharing expertise with the participating teachers. However, as the teachers were used to receiving directives from higher authorities under the centrally controlled education system, they were challenged when asked to use their own repertoire of knowledge, experiences and skills to solve the problems they encountered in their projects.

They may have perceived the researcher as an authority from whom to seek knowledge and decision-making.

One limitation of this study is that these findings are pertinent to the specific educational contexts in which the study was conducted. They may not be generalisable to other contexts. Because the researcher and the participating teachers were involved in the study, it was difficult for them to sufficiently distance themselves from the situation being researched. This may have implications for the methodological rigour of the data collection. Another limitation is that this study involved only 10 teachers from each school. Cascading the training for the rest of the school teachers or other schools could be less effective. An approach in which all of a school's teachers were trained might have been more productive because all of the staff would feel a sense of ownership of the process and increase their collaboration. Also, the three workshops that the teachers attended may not have adequately built their confidence for undertaking CAR.

Conclusions

In this article, we have discussed the contribution of CAR as a CPD model in building the capacity for teachers to transform their pedagogical practice towards inclusion. The principal findings have indicated that, in the two AR projects, CAR has been a viable option for in-service PD of teachers in the Zanzibar context. The findings of the two AR projects in this study have indicated that CAR contributes to fostering teachers' inclusive pedagogy and improving pupils' presence. This is despite the challenges and concerns expressed by the teachers, which can all be considered part and parcel of the teachers' professional growth. These findings have implications for the transformation of in-service teacher PD as well as school leadership and management. Schools need an organisational culture which will encourage teachers and school leaders to continuously reflect on, and collaboratively work to, improve their pedagogical practices. To ensure evidence-based and appropriate strategies for promoting inclusive education in Zanzibar and similar contexts, we propose adopting a whole-school CAR approach so that the school's entire staff feels ownership of the process. This approach will help to empower teachers to form professional learning communities as they tackle exclusion.

It would be interesting to conduct longitudinal studies to determine the likelihood of teachers to engage in CAR projects without the external facilitators (scaffolding). Further studies could also focus on the significance and worthiness of embedding CAR in initial teacher education. The differentiated levels of professional learning for teachers as described in this study can also be a focus in future research. In addition, the following questions that emerged from this study are worth consideration in future research: what structural transformations should be in place to foster systematic and meaningful organisational learning towards inclusive schools; and how can schools create a sustainable culture of career-long professional and collaborative learning?

Disclosure statement

No potential conflict of interest was reported by the authors.

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III

DEVELOPING INCLUSIVE PRE-SERVICE AND IN-SERVICE TEACHER EDUCATION: INSIGHTS FROM ZANZIBAR PRIMARY SCHOOL TEACHERS

by

Juma, S., Lehtomäki, E., & Naukkarinen, A. (2017)

International Journal of Whole Schooling, *13* (3), 67—87.

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Developing Inclusive Pre-service and In-service Teacher Education: Insights from Zanzibar Primary School Teachers

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To cite this article: Juma, S., Lehtomäki, E., & Naukkarinen, A. (2017). Developing inclusive pre-service and in-service teacher education: Insights from Zanzibar primary school teachers. *International Journal of Whole Schooling*, *13*(3), 67-87.

Abstract

Developing inclusive teacher education to improve learning and schooling for all children is attracting increasing interest worldwide. This study examined teachers' insights into the development of inclusive teacher education by drawing on collaborative action research conducted by 20 primary school teachers in Zanzibar, Tanzania. The data were collected through semi-structured interviews and self-reflective journals kept by the teachers and the first author. The qualitative thematic content analysis revealed: (1) the need to embed inclusive education and action research into pre-service and in-service teacher education curricula and (2) both school-based organisational learning and school–community and school–university collaborations may foster collaborative school cultures and inclusive in-service teacher education. The study discusses the role of teachers' voices in informing teacher education development for educational equity and inclusion.

***Key words*:** primary school teachers; inclusive teacher education; organisational learning; professional development; collaborative action research; sub-Saharan Africa.

Introduction

Inclusive education (IE) has gained popularity as an effective approach for educating all children by increasing their presence in schools, participation and (academic and social) achievement (Ainscow, Booth & Dyson, 2006; Forlin, 2013). Its use has recently been reaffirmed through the adoption of a new vision of inclusive and equitable quality education and lifelong learning for all in the UN's Sustainable Development Goal 4 and the Incheon Declaration for Education 2030. Forlin, Loreman and Sharma (2014) note that several governments worldwide have enacted IE policies, standards and guidelines. Yet, in many countries, pre-service and in-service teacher education reforms to support these new developments are lacking (Armstrong, Armstrong & Spandagou, 2011; Vavrus, 2009).

The situation is particularly poor in sub-Saharan Africa (SSA) (Forlin, 2010; UNESCO, 2014), where teachers lack not only sufficient training and resources, but also professional identities and autonomy. Buckler (2011) has observed that many countries in this region fall short with respect to teacher education policies. Lauwerier and Akkari (2015) and Hardman, Abd-Kadir and Tibuhinda (2012) have also noted that pre-service teacher training in SSA typically involves candidates with low levels of school education and weak entry qualifications, while in-service teacher training tends to be rather sporadic. Likewise, Akyeampong, Lussier, Pryor and Westbrook (2013) have stated that pre-service teacher education in this region is based on curricula that place little emphasis on learning quality or the diversity of pedagogical approaches. Harber (2012) further maintains that teacher education in SSA is authoritarian and lacks reflective practices. Despite their paramount importance, teacher education reforms to improve learning for all students have received little attention in the region (cf. Griffin, 2012; Harber, 2012; Moon & Wolfenden, 2012).

Examining teaching and teacher education issues in Tanzania from an ethnographic view, Vavrus (2009) finds that, despite the reforms in national education policy and syllabi, teacher education reforms related to preparing pre-service and in-service teachers to use learner-centred pedagogy and to understand the theories underpinning such approaches are lacking. Teaching and teacher education reforms in Tanzania and similar contexts should carefully consider local socio-cultural, political and economic factors. Otherwise, learner-centred pedagogical reforms are unlikely to be successful (Vavrus, 2009).

Teacher education reform is crucial for improving teaching and learning, and listening to in-service teachers is important for creating realistic and contextually relevant teacher education reform (Chaudary & Imran, 2012; Erten, 2015). Forlin (2012) asserts that ''teacher education requires consideration at both pre- and in-service levels and good quality and appropriate training are imperative if inclusion is to be effective'' (p. 6). Whilst some studies related to pre-service and in-service teacher education in Zanzibar have been conducted (e.g. Mosha, 2015), there is little scientific understanding of teachers' insights into how to promote inclusive teacher education.

Teachers are key partners in the successful implementation of IE. Since they are the ones who experience the challenges of inclusion, their voices on ways to improve pre-service and in-service teacher education are essential. Moreover, quality teaching with IE practices requires appropriate and well-designed teacher education programmes (Forlin, Kawai & Higuchi, 2014; Sharma, Forlin, Deppeler, & Yang, 2013). The need to improve the quality of teacher education is emphasised by the oft-cited quotation, ''the quality of an education system cannot exceed the quality of its teachers and principals'' (OECD, 2011, p. 235).

In-service teacher education and professional development through collaborative action research (CAR) have produced promising results related to developing capacity for implementing inclusion worldwide (Avalos, 2011; Carrington & Robinson, 2004; Makoelle, 2014b; Waitoller & Artiles, 2016). The interest in the significance of teachers' capacity

development through reflective inquiries can be traced to Dewey (1933), who emphasised reflective action among teachers (Etscheidt, Curan & Sawyer, 2012). Thus, in this study, we pay attention to the voices of in-service teachers who have implemented inclusive practices in their schools. In particular, the teachers in the present study attempted to develop inclusive collaborative inquiry practices and cultures through CAR projects. After describing the study context, we present and discuss the findings and explore the available relevant literature on what is contextually relevant in developing inclusive pre-service and in-service teacher education in Zanzibar.

Education system and teacher education in Zanzibar

In Zanzibar, formal education comprises two years of pre-primary education for 4- to 5-year-olds, six years of primary education (Standards I–VI) for 6- to 11-year-olds, four years of secondary education ordinary level (Forms I–IV) for 12- to 15-year-olds, two years of secondary education advanced level (Forms V–VI) for 16- to 18-year-olds and a minimum of three years of higher education (Ministry of Education and Vocational Training [MoEVT], 2006). Under this structure, basic and compulsory education (i.e. pre-primary education, primary education and secondary education ordinary level) takes 12 years.

Throughout this study, the term teacher education refers to both pre-service teacher preparation/training and in-service teacher support/professional development. Pre-service teacher education has traditionally been provided by teacher training colleges and universities. However, the 2006 education policy reforms place pre-service teacher education for government institutions within the remit of the State University of Zanzibar (SUZA), Zanzibar's sole public university. As a result, all public teacher training colleges are being gradually merged with SUZA (MoEVT, 2006).

The minimum duration of pre-service teacher education is two years, leading to a diploma qualification. The teaching practicum at this level comprises eight weeks of supervised teaching practice at the end of the first year. In higher education, training takes three years, leading to a bachelor's degree qualification with 16 weeks of supervised teaching practice (8 weeks at the end of each of the first two years). In-service teacher professional development falls under the remit of the Department of Teacher Education of the MoEVT. This department typically provides in-service professional development in the form of workshops and distance learning through teacher resource centres (Mosha, 2015).

In Zanzibar, teacher education institutions do not yet offer IE programmes at the bachelor's or master's levels. Since 2006, the Zanzibar Muslim Academy, a teacher training college, has provided a one-year in-service training course on IE. In 2014, SUZA introduced a two-year programme on inclusive and special needs education, which is offered to both pre- and in-service teachers at a diploma level (below the bachelor's level) and provides credentials to teach at the secondary education ordinary level (Forms I–IV). One of SUZA's two-year programmes—Diploma in Educational Leadership and Management—includes a course called Social Inclusion and Diversity in Schools. Studying in these programmes is voluntary, and IE is not compulsory at any level of teacher education.

In a further attempt to integrate IE theory into practice, the MoEVT in 2014 selected two primary schools to pilot an action research programme as a professional development model for developing teachers' confidence and problem-solving capacity to implement IE (Juma, Lehtomäki & Naukkarinen, 2017). Research has shown that action research develops teachers' capacity to improve their pedagogical practices and pupils' learning (Elliott, 2015; Juma, Lehtomäki & Naukkarinen, 2017).

Preparing and supporting teachers in inclusive teacher education

Research into appropriate ways of preparing and professionally supporting teachers to promote IE has become popular (Forlin, Kawai & Higuchi, 2015). There is a pressing need for teacher education to focus attention on ''reconceptualising the roles, attitudes and competences of student teachers to prepare them to diversify their teaching methods, to redefine the relationship between teachers and students and to empower teachers as co-developers of curriculum'' (UNESCO, 2013 p. 6). To realise a quality education system that benefits all students, Fullan (2013) suggests that education systems should: (1) foster greater intrinsic motivation among teachers and students, (2) engage them in continuous instruction and learning improvement, (3) inspire collective or team work and (4) affect all teachers and students.

Focusing on preparing pre-service teachers for inclusion is crucial for addressing negative attitudes and promoting teachers' inclusive practices (Sharma, Forlin & Loreman, 2008). However, teachers need to be systematically supported in promoting inclusion through the use of both traditional (but still relevant) and new approaches. Ad hoc and sporadic approaches, such as providing in-service training workshops or short courses in a piecemeal fashion, should not dominate in-service teacher education. Other relevant and cost-efficient opportunities for supporting on-going teacher professional development through mobile phones, social media or adaptations of the abundantly available open and free educational resources (Buckler, 2011) are now possible and can be effectively used in Zanzibar and other resource-constrained countries.

In this study, we draw on primary school teachers' CAR experiences for improving pre-service and in-service teacher education in Zanzibar, a semi-autonomous archipelago in Tanzania. We situate the teachers' recommendations in the context of the existing body of literature to reflect on and suggest how teacher education can promote inclusive teacher education and hence enable teachers to improve learning for all children. In particular, based on the teachers' CAR experiences, the study addresses the following two questions:

1. What do primary school teachers recommend for the development of inclusive pre-service teacher education?
2. What do primary school teachers recommend for the development of inclusive in-service teacher education?

The findings contribute to a growing body of literature on inclusive teacher education development. They also support a discussion on the role of teachers' voices on teacher education development towards realising inclusive and equitable lifelong learning for all. The study aims to participate in the discussion on future directions for inclusive teacher education development towards creating educational equity and excellence.

Method

Research paradigm and design

In this study we employed interpretive/constructivist paradigm (Creswell 2003; Mackenzie & Knipe 2006) by attempting to achieve an in-depth understanding of the teachers' views on the development of inclusive teacher education. We adopted action research design whereby the first author acted as a facilitator and a critical friend of the participating teachers during their CAR cycles. The use of action research for promoting

inclusion in Zanzibar was recommended in a 2013 evaluation of IE. The Inclusive Education and Life Skills Unit nominated two government primary schools (hereinafter referred to as Primary School A and Primary School B) to pilot action research for this purpose. Both schools are located in urban settings, which, in this study, refer to areas within or close to the major towns in Zanzibar.

Each nominated school selected 10 teachers based on their enthusiasm and readiness to form action research teams. Of these teachers, four (two from each school) worked as special education teachers in the special units. The remaining 16 teachers worked as regular education teachers for Standards I to IV. Most of the teachers (17) had undergone formal teacher training in a recognised teacher training college or university. Of the four teachers working in the special units, only one had undergone two-year specialised training as a special education teacher; the rest had only attended short courses (between two weeks and three months) on special education. After being selected, all 20 teachers participated in three 4-day capacity-building workshops to learn how to undertake action research and engage in it as a form of in-service professional development in promoting IE (see Juma, Lehtomäki & Naukkarinen, 2017). Based on the teachers' practical experiences and evidence generated through their CAR projects, we were interested in their insights and the way forward into the development of inclusive teacher education.

Prior to the data collection, approval for this research study was obtained from the Zanzibar Research Committee and the MoEVT. Permission was also sought from the administration of each school. Before collecting data, the first author informed the teachers about the intention of using the interview data for research and publication purposes. Following a verbal description of the informed consent, all the teachers willingly read and signed the informed consent forms. All teachers also gave verbal consent for audio recording of the interviews.

Respondent validation (Saldaña, 2016) was implemented by contacting some of the interviewees via email or phone to confirm a selection of points they made during the interviews. To ensure the anonymity of the participants, we have attempted to mask most of their direct and indirect identifiers. For this purpose, we have used the pseudonyms Primary school A and Primary school B to refer to the two schools and have assigned codes to each teacher to mask their actual names. For example, the code T1A refers to teacher number one of Primary school A and the code T2B refers to teacher number two of Primary school B.

Instruments of data collection

Data were collected mostly from one-to-one semi-structured interviews. Data triangulation was applied using the teachers' and the first author's self-reflective journals and the teachers' reports. The interview questions consisted of 14 guiding questions divided into three parts. The first part was about teachers' background information, formation of the action research teams, and aim of their action research projects. The second part focussed on the teachers' experiences and insights gained through their CAR projects. The third part addressed the teachers' views and suggestions on the development of inclusive teacher education.

Data collection and analysis

Data collection took place during and after the teachers' CAR projects. All of the interviews were audio-taped by the first author and transcribed verbatim in Kiswahili and English. The English transcription was important for the third author, who, unlike the first and second authors, was not conversant in the original language of the data. The translation

of the interview data from Kiswahili into English may have resulted in a loss of meaning, despite our best efforts to minimise such loss. The first author listened to the audio tapes of the interviews several times in order to increase familiarity with the data (Braun & Clarke, 2006; Saldaña, 2016) before the transcription. While listening to the recorded interviews, the first author also wrote down important data points. We thoroughly discussed and reviewed the transcriptions for accuracy by constantly comparing them with the original data from the audio recordings and the fieldwork notes. Engaging all three authors in the data analysis process helped in verifying the internal consistency of our interpretations.

The data were analysed using a qualitative thematic analysis reflecting guidelines proposed by Braun and Clarke (2006), who outline six steps of qualitative thematic content analysis: (1) familiarising oneself with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing the themes, (5) defining and naming the themes and (6) producing the report. Our data analysis was also informed by guidelines from Saldaña (2016) and Bogdan and Biklen (2007). To extract insight from the interviewees, we used process coding (e.g. using *–ing* participle clauses or gerunds) and *in vivo* coding (i.e. drawing codes from the participants' exact words) (Saldaña, 2016). Using Microsoft Word processing tools (Hahn, 2008), we also applied techniques like italicising, highlighting, bolding and colouring to mark striking chunks of data or intriguing quotations used in the description of the analysis. Constant comparisons (Bogdan & Biklen, 2007) of the *a priori* codes and those directly driven by the data were also applied.

The first author did the initial coding that was checked in collaboration with the second and third authors, who are long-serving senior researchers and teacher educators. Since coding is an interpretive act prone to subjectivity (Saldaña, 2016), the coding process involved several cycles. At times, there were discrepancies in the authors' wordings and phrasings of the codes. Through several revisions informed by intensive discussions and deep reflection on the codes and the data as a whole, consensus was reached on each point. Once the data were coded and the codes were refined, we developed categories and sub-categories that emerged from the patterns of the data. From these categories, we generated themes that were constantly reviewed and revised. The resulting key assertions are postulated in the discussion section.

Research Findings

In relation to the research questions concerning pre-service and in-service teacher education for inclusion, the qualitative thematic interview data analysis, the first author's field notes and the teachers' CAR reports yielded five broad themes. We have broken these themes into two categories: (1) insights into the development of inclusive pre-service teacher education (embedding CAR into pre-service teacher education and embedding IE into pre-service teacher education) and (2) insights into the development of inclusive in-service teacher education (adopting CAR as a professional development model for developing inclusive in-service teacher education, using a whole-school approach to support teacher professional development and using teacher resource centres to support inclusive teacher education development).

Teachers' insights into the development of inclusive pre-service teacher education

Apart from expanding CAR to serve teachers in all schools, teachers in this study clearly expressed their recommendation for embedding CAR into pre-service teacher curricula. This theme emerged recurrently during both the interviews and informal discussions between the participating teachers and the researcher.

> Yes, each teacher trainee should get this action research course. It should be offered there [at teacher training colleges] as a course so that when they [novice teachers] report to schools for duty and face inclusion problems, they are capable of easily addressing them. (T5A)

According to the participants, introducing action research as a course in pre-service teacher training curricula will help newly recruited teachers readily engage in action research as an in-service strategy to improve their careers by promoting inclusion through evidence-based practices.

> It [action research] should be offered in the colleges to the teacher trainees so that they are aware that when they work in schools, their primary role is to teach, but also to conduct action research to improve their practices. (T8B)

> The Ministry should have made action research a course in the teacher training curriculum just like Psychology, [which deals with] the child development, so that it becomes easier for the novice teachers from the colleges to conduct action research in order to identify and solve pupils' problems when they report for duty. (T6A)

With regard to embedding IE into pre-service teacher training curricula, teachers from both schools thought that introducing IE into teacher training curricula would help teachers at the beginning of their careers build confidence in identifying and addressing the diverse needs of their pupils.

> For the Ministry of Education, I recommend that inclusive education [be] included in the teacher training curriculum. This will [making teaching] easier for those [novice] teachers when they come to work in the schools. They will not face problems on how to teach inclusively, as they will have learnt [the methods in their colleges]. (T9A)

> When student teachers are taught inclusive education, they will no longer be afraid of those [pupils] with visual impairment, because there are some teachers who are scared of some children with visual impairment. If inclusive education is offered practically through action research [training], it will be much better for these new teachers. (T2B)

When further asked about how the integration of IE into the pre-service teacher training curriculum would help improve teachers' practices, the teachers contended that:

> It will be of much help because when one graduates from the [teacher training] college, she will be aware of what she is supposed to do in order to improve her teaching practices and help pupils. (T2A)

> They [the novice teachers] will not be reluctant or unwilling [to implement inclusion] because they know the goal and what problems we want to solve at the school. And, you know, the problems are always there. When one is solved, another one appears. So they [teacher training colleges] ought to make inclusive education and action research [compulsory] courses, like they do for Psychology. (T6A)

Teachers' insights into the development of inclusive in-service teacher education

Notwithstanding time limitations, teachers from both schools recommended the use of CAR to support the professional development of in-service teachers and promote inclusion in all schools in Zanzibar. For example, inspired by their action research projects to enhance inclusion, this teacher expressed her aspiration to build a system that would allow teachers to go beyond classroom teaching and engage in collective professional development through action research.

> […] all [serving] teachers should be provided this training on inclusive education by using action research. Teachers should not just teach, but should also get time to practice other things [such as action research] that are within their professional duties. (T7B)

From the teachers' perspectives, one advantage of conducting CAR is the ability to increase their repertoire of knowledge by sharing knowledge and skills during the course of the action research. They related the AR process to improving and enhancing their personal knowledge and skills. To support her argument, one of the teacher interviewees metaphorically contrasted knowledge with wealth:

> […] because the more you use your knowledge, the more you increase it. It's unlike wealth, [for which] the more you use it, the more it decreases. But as you start to put your knowledge into practice, it increases day by day. (T3B)

Central to the teachers' suggestions was the expansion of CAR training from the two pilot schools to the rest of the schools in Zanzibar. The teachers hoped that, through CAR training, their colleagues could also learn by doing how to incorporate inclusion in their schools.

> It [the Ministry of Education] should extend action research to other schools in order for all teachers in their schools to learn how to do inclusion. (T6B)

Inspired by the insights into inclusion gained from their action research project, another teacher interviewee expressed the need to develop all teachers' capacity to support all learners in their classrooms through action research.

> I think [that teachers need] further training. If we get further training on action research, we will be skilled in how to support all children: those with disabilities and others who just need additional support. You need training on how to support them all [in their learning process], how to teach them and various other ways of supporting them. This is because still we are not well prepared [for helping children learn better]. Through action research, teachers can improve [their practice]. So, the Ministry should plan to provide this training to all teachers in the schools. (T2A)

Through their CAR projects, teachers felt that their job became smoother and that teaching inclusively was possible. This kind of professional support encouraged the teachers

to support all children, including those with additional support needs. As one teacher suggested:

> My only suggestion is about providing frequent professional support such as this one [CAR] to the teachers whenever possible in order [to ensure] that we don't feel that our duties are difficult, which may lead us to segregate the pupils who need additional support. We need to make them participate actively in the lessons. (T2A)

While appreciating the role of CAR in their professional development for inclusion, the teachers were dubious about training only a segment of the staff. Rather than implementing one-off cascade model workshops to train only a few teachers (as was the case in this study, in which only 10 teachers—about 20% of the teacher population—were selected from each school), the teachers recommended using a whole-school approach to train all teachers at the school. When only a few teachers are selected for training on IE:

> […] it leads to other teachers [who are not participating in the project] feel[ing] that they are not responsible to implement it. [...] It's better for all teachers in the school [to attend the training workshop], lest they should see that this task is only for those who attended [the workshop], whilst every teacher has a responsibility [to implement IE]. (T1B)

The teachers also acknowledged the importance of involving school leadership in supporting teacher professional development in schools. The teachers suggested that school leadership must appreciate the importance of continuous, school-based professional staff development. For action research to be effectively introduced in schools, head teachers should be involved and convinced to allocate school time to maximise teachers' attendance and participation in AR projects.

> As for the issue of time, I think it's better if our head [teacher] is aware of it. Perhaps it's better to get some time within the working hours in order to offer training for whatever topic we shall be dealing with. It should not be [during] the weekend only because [during the weekend] everyone will have an excuse. **(**T2A)

The teachers believed that they could best develop reflective practice through action research if school management was also trained in the importance of continuous professional development. Only when head teachers have internalised the need for teachers to be up to date with recent development and research in the teaching profession will they have sufficient interest and enthusiasm to support other school staff in further training.

According to the interviewees, when the teacher resource centres are effectively used, they contribute to the increase of teachers' capacity development and confidence for implementing inclusion.

> It would be better if the Ministry used the [teacher resource centre] co-coordinators and advisers to offer action research training so that when we come to our schools and come across a challenge we are able to confidently address it. (T5A)

> It's also very important to reinforce the training [for] those who are in the schools now so all teachers get this training because it will help them to do their work better in many ways. **(**T7A)

Generally, the teachers in this study indicated a willingness to accept and support IE as an approach that can help improve the quality of teaching and learning for all children. They were eager to advance their practices to support all children in learning better, actively participating in the learning process and achieving their full potential. The teachers felt that IE is becoming more accepted among teachers, despite the challenges they face in its implementation. Hence, they believed that it was important for IE training and professional support to be extended to all pre-service and in-service teachers as an approach to improve teaching and learning. However, many teachers were also concerned about collaboration and mutual support between regular education teachers and special education teachers. For example, one special education teacher wanted the government to:

> …recruit more special education teachers who can support other teachers to implement inclusive education, because our number[s are] limited. (T4A)

Discussion

In this study, we have attempted to develop an understanding of teachers' experiences with the development of inclusive teacher education based on the insights they gained from their CAR projects. The teachers highlighted the need to reform pre-service and in-service teacher education. When teachers are motivated and supported to work together, they build a strong base for professional growth (Robinson & Carrington, 2002). Eventually, they can achieve professional collaborative autonomy, improve their identities and improve their career status. Reforms in teacher education, as highlighted by the teachers in this study and supported by the literature, are of critical importance in Zanzibar and elsewhere in SSA. Previous research (e.g. Akyeampong et al., 2013; Buckler, 2011; UNESCO, 2014) has indicated that teaching and teacher education practices in SSA are challenged by limited resources, a lack of mentoring, low work-related morale, teacher absenteeism, teachers' inability to identify and support pupils with learning difficulties, and an overemphasis on theory at the expense of practice. In the rest of this section, we discuss the teachers' recommendations in the context of previous research.

Embedding CAR in pre-service teacher education programmes

Inspired by their action research projects, the teachers in our study strongly recommended the adoption of pre-service teacher education reform to prepare teachers to be reflective practitioners who can competently reflect on their practice, identify and address barriers to learning and support all children. Infusing CAR in pre-service teacher education programmes enables teacher trainees to learn by reflecting on their own experiences and prepares them to be pedagogically (Larrivee, 2000) and critically reflective practitioners (Hagevik, Aydeniz and Rowell, 2012; Westbrook & Croft, 2015).

The teachers in our study recommended incorporating CAR in teacher education curricula. To implement this recommendation, teacher education programmes must be reformed to include more practical and reflective modes of assessing student teachers. One potential area in which CAR could be integrated into pre-service teacher training curricula is that of the coursework and teaching practicum. Student teachers could be engaged in practising CAR with local schools that implement IE as part of their coursework. Teaching practicums also represent an appropriate area for enhancing student teachers' reflective skills development (Körkkö, Kyrö-Ämmälä, & Turunen, 2016). During their practicums, student

teachers develop the capacity to integrate theory into practice, thus learning a skill essential to their lifelong professional development (Robinson, 2017).

The idea of embedding CAR in pre-service teacher education complements Cochran-Smith and Lytle's (1999) concepts of knowledge-in-practice and knowledge-of-practice, which involve teachers identifying and addressing barriers to learning through research in their classrooms and schools. Furthermore, Shulman (1987) emphasises the use of reflective opportunities to connect theory with practice among prospective teachers in teacher education programmes. However, we posit that embedding CAR in pre-service teacher education curricula in Zanzibar or any other context needs to be done in light of the country's curricula. Special consideration is critical for improving the assessment system, the human and material resources, the content and the quality of the curricula (Vavrus, 2009). The reforms may be most effective if they are implemented through a collaboration between private and government teacher training institutions to ensure uniformity in implementation, especially with respect to changing teachers' expected career roles.

Embedding inclusive education in pre-service teacher education

Another noteworthy teachers' recommendation identified in this study is that of embedding IE in pre-service teacher education. Literature on inclusive teacher education supports this recommendation by revealing that teacher education for inclusion has thus far focused on in-service teacher training, rather than initial teacher training (Kaplan & Lewis, 2013). We argue that, while it is appropriate (and, historically, more convenient) to focus on in-service training, it is now time to advocate and lobby for all teacher education institutions to make IE part of pre-service teacher training (Westbrook and Croft, 2015). In a similar vein, Stubbs (2011, p. 9) has argued that: ''the principles and practices of inclusive education cannot be taught effectively through separate courses. There needs to be a constant message running through all pre-service and in-service courses, distance learning programmes, informal exchange opportunities, mentoring systems and cluster school programmes''. Previous research has also established that when IE is integrated into pre-service teacher education, it saves time and resources needed to address negative attitudes later (Kaplan & Lewis, 2013). Infusing IE into pre-service teacher education supports inclusion in more schools and classrooms (Tiwari, Das, & Sharma, 2015) and helps to stop teachers from perceiving IE as an educational add-on (Sharma, Moore, & Sonawane, 2009).

Making IE pervasive in pre-service teacher education programmes is mandatory in South Africa, where policy demands that all pre-service teacher education graduates be well informed about IE and skilful at identifying and addressing barriers to learning for all children (Republic of South Africa, 2015; Walton & Rusznyak, 2016). However, such teacher education reforms are not always easy to adopt, particularly when teacher education institutions' capacities for IE are limited.

One important consideration for successfully embedding IE in pre-service teacher education programmes, however, is reforming teacher education institutions. Changes among pre-service teachers can be effective if teacher educators/trainers themselves practise what they preach. Student teachers can better implement inclusive practices if they observe these practices among their educators. Thus, as Bashan and Holsblat (2012) note, training through modelling is important for developing self-efficacy among pre-service teachers. In addition, to affect such changes, it is important to consider how changes in pre-service teachers' teaching practicums are organised. Specially, teaching practicums could be reorganised to incorporate inclusive practices, such as co-teaching, consultation with colleagues, team planning and consultations with other professionals (Forlin, 2012; Pugach & Blanton, 2009).

A stand-alone course, as suggested by the teachers in our study, can be used as a stepping stone towards integrating IE into all pre-service teacher education curricula. Thus, we argue, reforms requiring all pre-service teachers to take a core course in IE are essential as the nascent stage of incorporating IE into the teacher education curricula. Of critical importance is making this course compulsory at all levels of pre-service teacher education. If the module is elective, this may reinforce the idea that the responsibility for teaching children who need additional support lies only with those who take the elective course. Furthermore, it is crucial to focus IE on pre-service teacher training because this helps student teachers develop positive attitudes towards classroom diversity and feel confident and willing to support a diverse range of learners when they commence their careers (Sharma et al., 2013). If IE is included in all pre-service education curricula, novice teachers will feel that the responsibility of promoting inclusion is simply part of their jobs, rather than an additional burden. As emphasised by Booth, Nes and Strømstad (2003), however, this strategy requires teacher educators in teacher training colleges and universities to further develop and improve their competences and practices in IE.

Adopting CAR in inclusive in-service teacher education development

The teachers' recommendation to use CAR for professional learning and development echoes Avalos' (2011) and Wilderman's (2011) observations that, despite traditional professional development through workshops, conferences and courses, a shift towards engaging teachers in inquiry-based methods, such as CAR, is essential for effective teacher professional development. Professional development that is meaningful for teachers is one that is not detached from the realities of classroom practice (Robinson & Carrington, 2002).

With regard to the applicability of action research in resource-constrained contexts, studies in Namibia (O'Sullivan, 2002) and South Africa (Makoelle, 2014a) have shown that action research has great potential to improve teachers' professional growth. In particular, as O'Sullivan (2002) concludes following an action research study in Namibia:

> If we are serious about the professional development of unqualified and under qualified primary teachers in developing countries, it is critical that we use whichever approaches and methods will best bring this about. Action research has immense, as yet relatively untapped, potential here. The time has come to begin exploiting this. (p. 538)

Research has indicated the potentiality of institutionalising CAR in Zanzibar schools to promote inclusion (Juma, Lehtomäki & Naukkarinen, 2017). However, for these CAR undertakings to be successful, teachers must be adequately motivated and supported through school-based professional development. One potential way to support teachers in CAR engagement is through school–university (e.g. faculties of education) collaboration. Such collaboration is likely to promote inclusive teacher education practices (Robinson, 2017) and help both teachers and university educators co-construct knowledge as they bridge the gap between theory and practice (West, 2011). In addition, such collaboration may help university educators maintain contact with the school classroom reality, especially with respect to the challenges of teaching inclusively. Experiencing this reality is crucial, since some of the university educators who lecture on IE practices have no practical experience of real-life teaching in an inclusive classroom.

Using a whole-school approach for professional development

A whole-school training approach, as suggested by the teachers in our study, is useful in eliminating the view that implementation of IE practices is the remit of only those few teachers who have been trained and showing that, instead, such practices are the responsibility of all staff. Thus, this approach helps to create a sense of shared responsibility and collaboration among staff members, which is important for successful inclusion (Loreman, 2007).

Realising success in bringing about changes like inclusion in schools is a formidable task when teachers lack a common vision or attitude concerning the aspired change (Nishimura, 2014). Thus, fostering a common vision among all school staff through collaborative inquiries and teamwork is critical for achieving effective on-going professional development (Vangrieken, Meredith, Packer, & Kyndt, 2017). Successful and sustainable in-service professional development for promoting IE will only flourish when all school staff and community stakeholders share the same vision and work collaboratively (Collinson, Cook & Conley, 2006; McMaster, 2013). Suggesting future directions for inclusive teacher education, Forlin (2012, pp. 177–179) outlines the essential aspects of inclusion training using a metaphor of an ''inclusive wheel'' with five levels:

(1) Leaders/advisors: principals, consultants
(2) Institutions/schools: teacher educators, university lecturers, teacher training institutions, or agencies
(3) Initial Teacher Education (ITE): teachers in training, pre-service undergraduate or postgraduate students
(4) Professional learning: teachers-in-practice, in-service teachers
(5) Peripatetic/parents: other school staff, education assistants, visiting teachers, administrators, parents

Concomitantly with the above training schema, Forlin (2012) proposes a multi-agency approach for public and community awareness of promoting inclusion. Research has established that teacher collaboration with parents, colleagues and other professionals is key to inclusion success (Malinen & Savolainen, 2012) and school well-being (Kantavong, 2012). Thus, it is important for such collaboration skills to be nurtured beginning with initial teacher education.

The teachers in the current study also highlighted the need for collaboration between regular and special education teachers through school-based professional development activities. Similarly, Pugach and Blanton (2009) and Naukkarinen (2010) have emphasised the importance of collaboration between special education and general education teachers in fostering IE in teacher education. Such collaboration may help teachers: (i) develop strong synergy; (ii) reduce professional isolation, which may lead to a feeling of burnout; and (iii) discover new ways of addressing learning barriers for all pupils (Mitchell, 2014). Also, in addition to inquiring about practice, motivated teachers can work together in the classroom through collaborative teaching, which is an effective evidence-based strategy for promoting IE in schools (Mitchell, 2014). Thus within the IE framework, the teachers in the special units in some Zanzibar schools, as highlighted in the introduction section in this article, and the teachers in the mainstream classrooms could work collaboratively through co-planning and co-teaching. For such a collaborative work culture to be realistic, professional support from the Inclusive Education and Life Skills Unit and the Department of Teacher Education is necessary. This support is necessary for teachers to learn and work together to support the best interests of all children.

In this regard, the lack of an organisational culture that values and supports engagement in and utilisation of research knowledge may hamper the use of CAR to develop

teachers' professional knowledge or apply such knowledge in their classroom practices. For CAR to be adopted and used to promote inclusive practices among teachers, therefore, it is necessary to consider the development of schools' organisational culture (Schein, 2010) as a means for supporting collaboration among school staff carrying out inclusive practices. Of special significance are practice-oriented applications of organisational learning (Argyris & Schön, 1996; Collinson et al., 2006), communities of practice (Wenger, 1998) and professional learning communities (DuFour et al., 2010; Stoll et al., 2006) focused on sustainable collaboration and continuous development through whole-school thinking.

The crucial element in these applications would be—in a fashion tailored for SSA and other contexts with limited resources—the restructuring of channels of information flows and processing (i.e. the communication structure) in the school environment. Such a restructuring could enable staff to allot sufficient time for collaborative planning, reflection and assessment, as well as for getting to know and learning from one another's work. This kind of communication structure is cost effective and could also facilitate in-service training from colleagues from the same school.

Using teacher resource centres to support inclusive in-service teacher education

The role of teacher resource centres in promoting teacher professional development in Zanzibar has been largely positive (Mosha, 2015). The teachers in this study exhibited a positive view of the role of the teacher resource centres. This could be why the teachers recommended the use of these centres in promoting inclusive in-service teacher education. Mosha (2015) suggests that the teacher resource centres in Zanzibar play a pivotal role in promoting teacher quality through professional development and support. Therefore, Zanzibar's recent initiative to recruit inclusive education and life skills advisers to teacher resource centres may further support the development of inclusive teacher education.

Shortages of educational resources for the development of teacher education are not uncommon in the region (Buckler, 2011). However, if teacher education institutions take advantage of the wealth of open and free educational resources, such as those provided by Teacher Education in Sub-Saharan Africa (TESSA), Enabling Education Network (EENET) and UNICEF, the gap in educational resources for inclusive teacher education, at least in terms of electronic textual materials, can be somewhat minimised. TESSA, a network of teachers and teacher educators working in tandem with The Open University in the UK, aims to improve both the quality of classroom practice and access to teacher education resources in SSA. Both TESSA and EENET offer open educational resources in various languages, including Kiswahili (the national language of Tanzania) to support school-based teacher education. However, as UNESCO (2014) cautions, such distance learning initiatives work better when supplemented by face-to-face meetings with tutors or mentors (see also Haßler, Hennessy, Cross, Chileshe, & Machiko, 2015; Hennessy, Haßler & Hofmann, 2015).

Providing the support necessary to sustain such an important initiative for fostering inclusive practices in schools is crucial for both the central government and other educational stakeholders, such as non-governmental organisations, parents, teacher unions and teacher educators. As our findings have indicated, teachers may accept IE as an equitable human rights-based philosophy of education in theory, but may reject it in practice if they are not sufficiently supported through continuous professional development. Teachers need this support to keep abreast of best practices from various parts of the world. It should be noted that IE is not a quick fix; rather, it is an on-going process of changing educational systems to welcome and support all learners. This process requires stakeholders to commit to teacher support and professional development through the fostering of collaborative work cultures over the long term (Robinson & Carrington, 2002).

Our findings confirm other research findings with regard to the relevance of CAR in supporting teacher professional development. UNESCO (2009) recommends that governments improve teachers' status and working conditions, design sustainable mechanisms for recruiting appropriate pre-service teacher candidates and retain qualified teachers willing to be responsive to the learning needs of learners from diverse backgrounds. These recommendations are particularly important for the present discussion because they reflect the real-life situation of Zanzibar and other contexts with limited resources. Therefore, taking into account teachers' insights, as presented and discussed in this study, is crucial for improving teacher education practices towards inclusion. Teachers' voices, Buckler (2011) suggests, should be given due consideration in efforts to improve teacher education policies and practices.

Conclusions

Based on the teachers' insights into the development of inclusive teacher education, our study findings suggest that CAR can play a pivotal role in improving both pre-service teacher education and in-service professional development and lifelong learning among in-service teachers. Given the importance of collaborative skills in promoting learning for all learners, we argue that it is essential to incorporate such skills in both pre-service and in-service teacher education programmes to enable all teachers to teach inclusively. Such an initiative will require instituting organisational learning practices that value collaboration and teamwork. However, it is critical that these reforms consider the need to simultaneously improve teachers' status, motivation and working conditions. Of equal significance is the need for reforms in teacher preparation to ensure that future teachers are better prepared to respond to the diverse learning needs of their pupils. If not well prepared, teachers can become caught in what Razer and Friedaman (2017, p. 1) call the ''cycle of exclusion'', in which teachers are not professionally capable of appropriately responding to the diverse needs of their students.

The findings, which could be transferred in the broader contexts beyond the context of the study, have direct practical implications for the process of improving the quality of learning and schooling for all children through development of inclusive teacher education. Future research could investigate how teacher education institutions, such as universities and colleges, respond to educational reforms. It would also be beneficial to further investigate how the teacher resource centres can be more effectively supported in making use of open educational resources to develop effective and cost-efficient in-service teacher education.

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