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Understanding Education in the Seychelles

Digest of Research from Master's in Education Leadership Cohort 1 (2018-2021)

Understanding Education in the Seychelles Digest of Research from Master's in Education Leadership Cohort 1 (2018-2021)

Edited by:
Mats Deutschmann, Olga Klymenko and Justin Zelime

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Understanding Education in the Seychelles

This edited collection provides unprecedented insights into current issues in education in the Seychelles. Focus on education in this small island nation has been a priority ever since independence in 1976, and as a nation Seychellois can proudly boast many impressive achievements in this field. For example, free and compulsory education from the age of six to sixteen, accessible for all, has led to literacy rates of 96 per cent, which are the highest in the region. With attainment rates close to 100 per cent, the Seychelles was the first African nation to fully achieve the UNESCO Education for All goals in 2014. Seychelles also has a free upper secondary school system attended by a large proportion of our youth, and to further the opportunities for local educational progression, the University of Seychelles was established in 2009.

This publication marks yet another major accomplishment in the field of education. It is the result of the concerted efforts of the students of the first cohort of the Master's in Educational Leadership offered at the University of Seychelles. Most of these students are actively working in the field, as school leaders and teachers, and their research thus represents a unique inside perspective into the current Seychelles educational ecology. This publication is also the first produced under the Education and Socio-Economic Research Institute (ESERI), whose launch further secures future research for progressive social, economic and educational transformations. We thus hope that this book will be used as an important work of reference when future pathways for educational development and improvement are laid down.

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Contents

Acknowledgements 6

List of Contributors 7

Preface 10

Introduction – Understanding Education in the Seychelles.
MATS DEUTSCHMANN, OLGA KLYMENKO and JUSTIN ZELIME 11

Themes and Studies 17

Theme 1. Inclusive Education 18

Study 1. Understanding Teachers' Challenges of Inclusive Education Implementation in order to Improve Leadership in Secondary Schools in the Seychelles.
JENNY KILINDO 19

Study 2. Catering for Students' Learning Styles: A Case of a State Primary School in the Seychelles.
FATMA JEANINE BIBI 26

Study 3. Issues and Concerns in Implementation of Inclusive Education in Primary Schools in the Seychelles.
JINA ANDIMIGNON 32

Theme 2. Supporting Learner Achievements 39

Study 4. Does Leadership Training Make a Difference? - A Case Study of the Impact of Leadership Training on Curriculum Leadership and Student Performance in Six Seychelles Primary Schools.
LINA MARLENE LESPERANCE 40

Study 5. Influence of Teacher Characteristics on Academic Achievement of Learners in the Seychelles.
ANNE JEREMIE 46

Study 6. Low Self-esteem: A Challenge Hindering Student Progression and Practical Advancement. A Case Study of the Seychelles Tourism Academy.
CECILE PAYET 53

Theme 3. Family Involvement 59

Study 7. Family Involvement in Children's Learning – A Case Study of its Nature, Context and Impact on Primary Level Academic Performance.
THERESE AGNES ATHANASE 60

Study 8. The Impact of Parental Engagement on Pupils' Academic Attainment: A Case Study of a Primary School in the Seychelles.
AGNELLE MONTHY 66

Study 9. The Implementation and Evaluation of a Parental Involvement Intervention in Students' Learning in the Seychelles during the COVID-19 Pandemic.
JACQUELINE CELESTINE 73

Theme 4. Building and Supporting Teacher Competencies 79

Study 10. Issues and Concerns of Novice Teachers in the Primary Schools: A Study of Three Primary State Schools on Mahe, Seychelles.
BARBARA MEDOR 80

Study 11. Teachers' Pedagogical Content Knowledge in Mathematics - A case study of Early Childhood teachers in Seychelles Primary Schools.
LOUISETTE GERMAINE AMELIE 87

Conclusion – A Bird's Eye View of Current and Future Issues in Education in the Seychelles.
MATS DEUTSCHMANN, OLGA KLYMENKO AND JUSTIN ZELIME **.....** 94

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Preface

Master's in Educational Leadership was designed by the Commonwealth of Learning to enhance leadership skills and knowledge of educational leaders. Being awarded by the University of Mauritius, the programme was delivered at the University of Seychelles in 2018-2020 as a blended course, where students benefitted from online sessions from the Centre for Innovative Lifelong Learning at the University of Mauritius and face-to-face sessions with academics at the University of Seychelles.

Offering Master's in Educational Leadership for the first cohort of students at the University of Seychelles resulted in a body of contextualized research tackling several up-to-date gaps and issues in the domain of education in the Seychelles. The fact that the students in this course were educational practitioners with an extensive and versatile experience in the field, holding key posts in a number of local schools and other educational entities, enabled a multi-perspective take on some burning educational problems, a consideration based on both first-hand empirical material and in-depth analysis. Showcasing this research became a responsibility that the Education and Socio-Economic Research Institute (ESERI) at the University of Seychelles happily embraced, given the value attached to it for a number of reasons. First, the presented papers collectively inform the national agenda on education, identifying gaps, issues and concerns, suggesting evidence-based solutions and thus contributing to the quality of education in the country. Next, presented research serves as baseline for further endeavors in identified areas and beyond. Moreover, from an ethnographic point of view, this collection of papers provides unique country-specific data which, considered alongside data from other territories, contributes to a more comprehensive understanding of global trends in the field.

The production of this volume became a learning experience in itself. It started with a crash course of academic writing focusing on Master`s theses compression, which ESERI organized for the authors, bringing together academics from various faculties at UniSey and internationally. The course was followed by a round of writing, peer-reviewing, re-writing and editing activities, sustaining the research discussion on the micro-level of individual writer, peer-reviewer and editor cooperation, and on the macro-level of combined effort towards the aggregated message of the presented publication. With this said, we proudly present this unique publication. Enjoy!

Introduction

– Understanding Education in the Seychelles

MATS DEUTSCHMANN, OLGA KLYMENKO and JUSTIN ZELIME

Access to quality education a basic human right. It is the key to sustainable development and national/international progress. There are good reasons for the UN (United Nations, 2015) to list *quality education* as a key goal for sustainable development. Not only is it a prerequisite for many of the other goals, such as the elimination of poverty and hunger, access to good health care and decent work, as well as innovation and economic growth, and the development of industry and infrastructure. It is also the key for current and future generations to understand and respect our relationship to ourselves, each other, and the earth we are living on. Such knowledge is essential for personal growth, gender equality, respect for our oceans and life on land, and responsible consumption – other key goals listed under the 2030 Agenda. Without this knowledge and understanding, the future looks bleak, and in this sense, it is not an overstatement to claim that education is indeed a "matter of life and death"!

Given the importance of education, it is small wonder that this budget post in public expenditure often is prioritized. On a global basis, nations spend an average of approximately 4 per cent of their GDP (Gross domestic product) on education (the World Bank, 2022), but this figure varies greatly from nation to nation. Noteworthy here is that many nations that rank high in terms of GDP, innovation and sustainability, also tend to spend above average on education. For example, the Nordic countries (Finland, Sweden, Denmark, Iceland and Norway), known for their innovation and high standards of living, all spend between 10-15 per cent of their total government expenditure on education. The equivalent figure for the Seychelles is around 10 per cent. In short, much of our tax money goes to education – a wise investment.

Education is also something which we all have a relationship to, and school matters tend to be widely and vigorously debated topics in media, in the Seychelles and elsewhere. The general picture that often comes across is one of declining results and standards. "Things were better back in the days". Unlike other areas of public concern, such as health care – a domain where, by general consensus, specific professional knowledge seems to be a prerequisite for research activities – everyone seems to be an expert when it comes to education. Afterall, we have all gone to school and experienced education firsthand, and many parents, if not all, have

strong opinions of how schools should be run. This is understandable; we all care for our children. The general concern for matters related to education is also something which politicians are quick to home in on, and it is, and arguably should be, a focus that can decide political success or failure in elections. While the public and political engagement in educational matters should be seen as positive, there is also a danger in this.

Education is complex and there is no quick fix. A comprehensive state system must cater for all its learners, and each child has different prerequisites and needs for learning. There is no one single formula that will solve this. In addition, a school never works in isolation. Activities in even the best run school can, and will at times be, disrupted by external factors over which school leaders and teachers have little control – outside events such as a pandemic, disrupted family constellations, substance abuse, and poverty are just some examples. Running a school also means meeting various needs and demands from different parties of interest (learners, staff, parents and authorities), while still adhering to the requirements of various steering documents and… keeping within a budget. A school must also meet the ever-changing needs of society, and prepare children for a future which we know nothing about, except that it will be very different from the present. This can indeed be a balancing act.

Factors such as those listed above mean that the only constant in an education system is unpredictability and change. Consequently, no matter how strong an education system is, it needs constant development and renewal to maintain its success. We argue, however, that such development should not be driven by short term populist agendas (political or otherwise). Instead, educational development should be guided by science, systematic research and recognized experience from the field. With a vision to build knowledge for a better tomorrow, and a mission to create a forum for developing and disseminating interdisciplinary research to support progressive educational, and socio-economic transformations, ESERI wants to contribute to such sustainable educational development through this publication. All research below has been undertaken using sound scientific principles from the field of education, and the studies have been carried out by practitioners who together represent centuries of practical experience.

The texts below have been organized into four distinct themes. The first three studies deal with the topic of **inclusive education**, that is an "approach to teaching and learning based on a philosophy and pedagogical practices that allow each learner to feel respected, confident and safe so as to better promote the development of his or her full potential" (Ministry of Education, 2015). **Study 1**, "Understanding Teachers' Challenges of Inclusive Education Implementation in order to Improve Leadership in Secondary Schools in the Seychelles" by **Jenny Kilindo**,

focusses on the progress of the implementation of inclusivity in the Seychelles, and investigates teachers' and Special Needs Coordinators' perceptions, experiences and reflections of inclusive education and how it is organized in five secondary schools. Kilindo complements these perceptions and experiences with observations from the field, and thereby manages to draw up a holistic picture of the realities of implementing inclusive education in secondary schools.

Addressing the same issue but from a primary school perspective, **Study 2,** "Catering for Students' Learning Styles: A Case of a State Primary School in the Seychelles", by **Fatma Jeanine Bibi**, provides a context-based analysis of the nature and level of individual learning styles provision in one school in the Seychelles. Considering teachers' understanding of learning styles, their didactic approaches to cater for them, and the support they get to implement them, the paper comes up with some interesting observations regarding the relationship between the teachers' perceived situation with differentiated teaching and its practical reality.

Study 3, "Issues and Concerns in Implementation of Inclusive Education in Primary Schools in the Seychelles", by **Jina Andimignon**, also examines issues related to the implementation of inclusive education from a primary school perspective, but this time using evidence from several schools. The study identifies some deficiencies in hindering the realization of the *Inclusive Education Policy* formulated by the Seychelles Ministry of Education in 2015. Through the analysis of how Inclusive Education is perceived, practiced and managed in three primary schools of different size, the paper provides a focused overview summary of shortcomings and formulates suggestions to address them.

The second theme, **Supporting Learner Achievement**, is motivated by the Competency Based Approach (CBA) to curriculum, adopted in 2017. The theme deals with various issues of how learning institutions work to help students realise their learning potentials. In **Study 4**, "Does Leadership Training Make a Difference? - A Case Study of the Impact of Leadership Training on Curriculum Leadership and Student Performance in Six Seychelles Primary Schools", **Lina Marlene Lesperance** looks at the process of introducing a new curriculum approach, the Competency Based Approach (CBA), aimed at improving learners' success in primary schools. The study specifically examines the impact of leadership training of headteachers on curriculum leadership and student performance. An area of special interest in this study, is the relationship between headteachers and middle leaders, who are more directly involved in the implementation of the curriculum.

In **Study 5**, "Influence of Teacher Characteristics on Academic Achievement of Learners in the Seychelles", **Anne Jeremie** explores what teacher characteristics contribute to successful

learning in the classroom. Here she investigates the correlation between learner achievement and the teacher characteristics age, experience, qualification, and ICT competency. The target group investigated were primary 2 pupils, and the subjects chosen were English and Mathematics. The study points to the importance of teacher experience in assuring learner success, and stresses the importance of measures to ensure that teachers stay in the profession.

The final study in the theme **Supporting Learner Achievement,** namely **Study 6,** "Low Self-esteem: A Challenge Hindering Student Progression and Practical Advancement. A Case Study of the Seychelles Tourism Academy", by Cecile Payet explores the extent to which students' low self-esteem affects their ability to handle practical components of their training. Focusing on manifestations, causes and implications of students' low self-esteem for their practical training and further professional success, the study contributes to a better understanding of the concept of self-esteem as an element of professional education.

The next theme, **Family Involvement**, is of great importance given the Seychelles government's renewed emphasis on improving family values and education as being a 'shared responsibility'. The theme approaches the ways in which parents and guardians can support learners, and evaluates the impact of such activities. In **Study 7**, "Family Involvement in Children's Learning – A Case Study of its Nature, Context and Impact on Primary Level Academic Performance", **Therese Agnes Athanase** evaluates the impact of family involvement on learners' achievement. The ambition here is to gain a better understanding of what constitutes family involvement in the Seychelles, and what factors affect this involvement. An overarching ambition is to help inform schools to choose the most effective and appropriate ways to improve the overall relationship with parents/family in order to increase their impact on the outcomes of the learning of their children.

Study 8, "The Impact of Parental Engagement on Pupils' Academic Attainment: A Case Study of a Primary School in the Seychelles" by **Agnelle Monthy** also explores the relationship between pupils' academic attainment and their parents` engagement in their learning. Presenting the results of an intervention, the paper demonstrates that a centralized policy-oriented approach to Parental Engagement can yield positive results, translating not only in improved academic performance, but in enhanced confidence of pupils, potentially facilitating them in long-term personal and career growth.

Study 9, "The Implementation and Evaluation of a Parental Involvement Intervention in Students' Learning in the Seychelles during the COVID-19 Pandemic", by **Jacqueline Celestine**, examines the specific case of how parents were mobilized to help their children in their learning during the COVID-19 lock-down in 2021. The study describes how a well-

structured and clearly communicated programme for parental involvement and support surprisingly improved learners' achievement despite the lock-down.

The final theme, **Building and Supporting Teacher Competencies**, approaches a key prerequisite for a functioning education system – the competence and well-being of its teachers. The theme constitutes two studies. In **Study 10**, "Issues and Concerns of Novice Teachers in the Primary Schools: A Study of Three Primary State Schools on Mahe, Seychelles**"**, **Barbara Medor** catalogues the factors contributing to insecurity and dissatisfaction of teachers in early years of their career, which can potentially lead to their quitting the profession and thus wasting the effort invested in their professional development. The paper suggests some steps to address the above issues and thus cut down on, or prevent, the existing teachers flow and shortage.

The final **Study 11**, "Teachers' Pedagogical Content Knowledge in Mathematics – A case study of Early Childhood teachers in Seychelles Primary Schools", by **Louisette Germaine Amelie**, explores primary teachers' Pedagogical Content Knowledge (PCK) in the subject of Mathematics in primary one and two, and how this impacts on learner achievements. PCK in this context is defined as the teacher's ability to transform content into methods that are pedagogically powerful, and that can adapt to the various abilities and backgrounds that students bring to school.

The studies are followed by a **conclusion**, where we will home in on common and particularly urgent aspects of concern highlighted by the various studies. We will also point out gaps and suggest relevant topics for future research.

References

Ministry of Education, 2015. *National Policy for Open and Distance Learning*. Available from: https://planipolis.iiep.unesco.org/sites/default/files/ressources/seychellesnationalpolicyprovisionopendistancelearning.pdf [Accessed 29 September 2022]

The World Bank, 2022. *Government Expenditure on Education* (UNESCO, Institute of for Statistics). Available from: https://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS?end=2021&start=1970 [Accessed 29 September 2022]

United Nations, 2015. *The UN Sustainable Development Goals*. United Nations, New York, 2015. Available from: http://www.un.org/sustainabledevelopment/summit/ [Accessed 29 September 2022]

Themes and Studies

Below follows eleven articles based on the full length theses produced by the first cohort of Master's students at the University of Seychelles. Note that these 'articles' actually constitute shortened versions of the original works, which have been extensively edited and modified. We hope we have done them justice. For access to the original works, please contact the authors directly. We have chosen to organize the studies into four themes:

1. Inclusive Education;
2. Supporting Learner Achievements;
3. Family Involvement;
4. Building and Supporting Teacher Competencies.

Theme 1.
Inclusive Education

Study 1.
Understanding Teachers' Challenges of Inclusive Education Implementation in order to Improve Leadership in Secondary Schools in the Seychelles.

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Keywords: *Inclusive education, secondary schools, challenges, solution*

Introduction, Background and Aims

Over the past few decades, inclusive education, where students with special educational needs and disabilities (SEND) are educated in the mainstream classroom (Kirschner, 2015), has been introduced in schools all over the world in order to help ensure that every child, irrespective of their ability, has a fair chance to access education (Mngo and Mngo, 2018, and Gurjar, 2019). Seychelles is no exception (see MoE, 2015).

Of particular importance in this work in the Seychelles, was the Inclusive Education Policy of 2015 (MoE, 2015), whose aim it was to ensure accessibility of mainstream schools to children with SEND, and to equip teachers with the necessary skills and resources to implement these policies. Under this framework, a Special Education Unit was created under the Seychelles Ministry of Education (MoE), and some teachers from schools were trained to become Special Needs Coordinators (SENCos). Their role was to act as a bridge between the MoE and the schools, and to strategically lead the implementation of inclusive education in their schools. However, despite the steps taken, the concept of inclusive education is still relatively new to teachers, especially in secondary schools, and many teachers have "little or no experience teaching children with disability" according to Main, Chambers, and Sarah (2016: 1). In addition, most of the original SENCos who were trained in 2015 are no longer working in that capacity today.

Understanding the challenges teachers face when catering for students with special needs is crucial for the successful implementation of inclusive education policies (Pearce and Forlin, 2005). International research has pointed to a number of such challenge areas. Identified problems include lack of resources to cater for SEND students – equipment, support staff, and appropriate class rooms, for example (see Ralejoe, 2019 and Fuandai, 2010). Particularly challenging is the lack of structural support from second parties such as therapists, educational

consultants and even parents (Pearce and Forlin, 2005). Aspects of organisational structures, such as curricula, have also been pointed out as problematic, in particular the secondary school focus on subject specificity. According to many researchers, specialised subject teachers tend to focus on their subject requirements rather than on designing learning programmes that cater to the individuality of students (see for example Meijer, 2005 and Pearce and Forlin, 2005). Lack of training to cater for inclusivity is another common challenge mentioned in the literature (Attwood, MacArthur, and Kearney, 2019).

In response to such challenges and with the aim to investigate the progress of the implementation of inclusivity in the Seychelles, the study investigates teachers' and SENCos' perceptions, experiences and reflections of inclusive education and how it is organized in secondary schools. Areas of query related to inclusivity included five aspects: 1. Training; 2. Curriculum implementation, for example preparation and classroom management strategies; 3. Available support; 4. the role of the SENCos; and 5. leadership driven changes teachers and SENCos would like to see in order to implement inclusive education successfully in their schools.

Method

The findings discussed below were based on a mixed method approach resulting in three distinct data sets. Firstly, questionnaire responses from 50 teachers were collected from five secondary schools. In addition to background information about the participants, the questionnaire included questions on the teachers' background and training on inclusive education, aspects related to lesson delivery and classroom management, and finally on perceived support to carry out inclusive education.

Secondly, the study included interviews with the SENCOs in the five schools. They were asked about their education background and training in the field of inclusive education, their roles in their respective schools and what kind of support they provide to teachers. The interviews also included questions on perceived strengths and shortcomings of the present system.

Finally, a total of ten classroom observations were carried out with focus on how much time was spent on SEND students and how teachers were coping with inclusive education in their classes. Ethical considerations such as anonymity and confidentiality were central in the study and all participants were made aware of the aims and objectives of the research.

Findings

In relation to the first area of query, namely *training*, questionnaire responses indicated that a majority of the teachers (52 per cent) felt that they had not received adequate training to identify SEND students and to cater for their special needs. In addition, a large proportion of the teachers (about 40 per cent) stated that they had inadequate knowledge of the Inclusive Education Policy (MoE, 2015) and the formal regulations and legislations related to this policy. All the five SENCos interviewed were relatively new to the job and had not partaken in the initial training programs that were offered in 2015. All five thus lacked major formal training for their roles, but they had, however, been offered sporadic workshops organised once or twice a year by the Special Needs Unit at the Ministry of Education.

Curriculum implementation in relation to SEND students was seen as particularly challenging by the teachers. Most teachers (64 per cent) felt that the curriculum did not allow them the flexibility to adapt their teaching to SEND students. Nevertheless, when it came to teaching strategies, most teachers (86 per cent) agreed that they use different strategies to cater for their students. This said, most respondents pointed out that they are not provided with adequate resources to do so. Time, in particular, was a limited resource, and a large proportion of teachers (40 per cent) pointed to adaptations for SEND students as being time consuming and increasing their workload. In fact, 40 per cent of the respondents argued that they spend too much time with SEND students, and 52 per cent of the respondents pointed to the fact that that they prepared different sets of lessons for their students depending on their needs.

Observations corroborated these claims and teachers were seen to use different strategies to cater to students with diverse needs. For example, students were observed doing different activities in the same lessons, such as using different resources (flashcards and textbooks) than their fellow learners to assist in them their learning. Whole class explanations were often supplemented with one-to-one explanations for those who needed further clarification. There were also strategies encouraging students to work collaboratively together regardless of their abilities, for example, pair activities where students helped and encouraged each other to achieve set goals. There were also frequent observations of one-to-one interaction between teachers and SEND students after the rest of the class had been set on task. These interactions allowed teachers to give the students the extra help that they needed but was quite demanding on teachers thus affecting their ability to cater for all their students for the duration of the lesson. In the ten classes observed, only four teachers were able to conclude their lesson before the bell rang.

The *support* provided for teachers and SENCos was a third area of query in this study. Here teachers pointed to colleagues, SENCos and parents being the groups that gave them most support. The support provided by management and professionals such as therapists, however, seemed to be minimal. Interviews with the SENCos showed that their *role* (the fourth area of query) included advising teachers on the best ways to cater to SEND students; preparing special activities, resources and programmes for the students; assisting teachers in class and removing students from class for one-to-one support. One SENCo mentioned that they go so far as to help students with their clinical appointments when parents fail to do so.

Noteworthy, however, was the fact that SENCos are required to teach their specialist subjects 5-10 periods a week alongside performing their SENCo duties. The SENCos interviewed had an average of up to 50 students under their care, and felt they were extremely pressed for time and overburdened. Many pointed to the fact that they would have liked assistant resources to help them. The was also consensus among the interviewed SENCos that they would like much more support from stakeholders, especially from the senior management of the school, to provide them with rooms and the resources that they needed. For example, out of the five schools, only two SENCos had a dedicated room of their own. SENCos also expressed a wish for more support from teachers in the school. According to one interviewee, teachers seemed only to think about their class averages and the results in the national exams rather than each learner's needs. SENCos expressed a general need for a change in mind-set whereby teachers should recognise that SENCos cannot be the only ones catering for SEND students, but rather that this should be a responsibility shared by all staff within the schools.

Conclusions and Recommendations

According to questionnaire respondents, the most significant leadership driven changes that they would like is to be provided with appropriate resources, followed by more support from specialists, parents, and the school management. A large majority also pointed to the need of further training in inclusive education. These, and further recommendations from the questionnaire respondents and the interviews, are summarized in Figure 1 below.

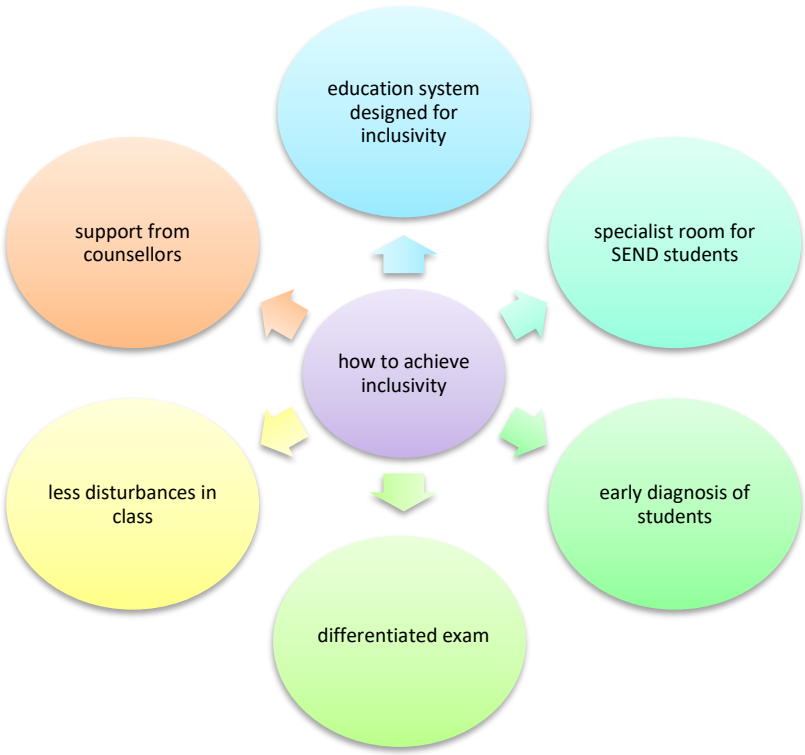

Figure 1: Measures needed to achieve inclusivity

The study concludes that previous research has shown that school leaders need to play a proactive role in supporting inclusive education in their schools. In the case of Seychelles, this is no exception, and the results of the study show that teachers as well as SENCos point to the need for support in four main areas:

1. adequate training and frequent professional development;
2. curriculum implementation and assessment review to cater for SEND learners;
3. support from stakeholders;
4. and availability of adequate resources.

References

Attwood, S., MacArthur, J. and Kearney, A., 2019. Beginner secondary teacher preparedness for inclusion. *International Journal of Inclusive Education* [online], 23(10), pp.1032-1048. Available from: https://www.tandfonline.com/doi/abs/10.1080/13603116.2019.1625455. [Accessed 03April 2020].

Fuandai, C., 2010. Catering for children with special needs in the regular classroom: challenges and the way forward. *Edo Journal of Counselling* [online], *3*(1), pp.144-151. Available from: https://www.ajol.info/index.php/ejc/article/view/52693. [Accessed 03April 2020].

Gurjar, M.S., 2019. A study of secondary-school teachers' awareness towards inclusive education. *Scholarly Research Journal For Humanity Science & English Language* [online], 4 (22),pp. 5740-5746. Available from: https://www.researchgate.net/publication/332604657_A_STUDY_OF_SECONDARY-SCHOOL_TEACHERS'_AWARENESS_TOWARDS_INCLUSIVE_EDUCATION. [Accessed 22 March 2020].

Main, S., Chambers, D.J. and Sarah, P., 2016. Supporting the transition to inclusive education: teachers' attitudes to inclusion in the Seychelles. *International Journal of Inclusive Education* [online], *20*(12), pp.1270-1285. Available from: https://www.researchgate.net/publication/299847766_Supporting_the_transition_to_inclusive_education_teachers'_attitudes_to_inclusion_in_the_Seychelles. [Accessed 30 March 2021].

Meijer, C.J. ed., 2005. *Inclusive education and classroom practice in secondary education: Summary report* [online]. European Agency for Development in Special Needs Education. Available from: https://www.european-agency.org/sites/default/files/inclusive-education-and-effective-classroom-practice_IECP-secondary-Literature-Review.pdf . [Accessed 22 March 2020].

Ministry of Education, 2015. *Inclusive Education Policy*. Mont Fleuri, Seychelles: Ministry of Education.

Mngo, Z.Y. and Mngo, A.Y., 2018. Teachers' perceptions of inclusion in a pilot inclusive education program: Implications for instructional leadership. *Education Research International* [online], 2018. Available from: https://www.researchgate.net/publication/324157172_Teachers'_Perceptions_of_Inclusion_in_a_Pilot_Inclusive_Education_Program_Implications_for_Instructional_Leadership/link/5ac241520f7e9bfc045e8860/download. [Accessed 03April 2020].

Pearce, M. and Forlin, C., 2005. Challenges and potential solutions for enabling inclusion in secondary schools. *Australasian Journal of Special Education* [online], *29*(2), pp.93-105. Available from: https://www.researchgate.net/publication/249047402_Challenges_and_potential_solutions_for_enabling_inclusion_in_secondary_schools [Accessed 12 February 2021].

Ralejoe, M., 2019. Teachers' views on inclusive education for secondary school visually impaired learners: An example from Lesotho. *Journal of Education (University of KwaZulu-Natal)* [online], (76), pp.128-142. Available from: http://www.scielo.org.za/scielo.php?script=sci_arttext&pid=S2520-98682019000200007. [Accessed 30 March 2021].

Study 2.
Catering for Students' Learning Styles: A Case of a State Primary School in the Seychelles.

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Keywords: *Learning style, lesson planning, lesson delivery, assessment of learning, teacher support, case study*

Introduction, Background and Aims

A right to education for every child is supported by a number of international agreements and regulations (United Nations, 1989; UNESCO, 1994). The Republic of Seychelles was one of the first countries to ratify the *United Nations Convention on the Rights of the Child* in 1990 and endorsed *UNESCO's Education for All* in 2000. The Seychelles Government constitutionally guaranteed the right of every citizen to education, followed by drafting and implementing the *Seychelles National Curriculum Framework* (Ministry of Education, 2013), focusing on inclusion and the need for schools to ensure that children are provided the best opportunities to learn and fulfil their aspirations.

Despite the universal acknowledgement of the right to education for children, realization of this right can become problematic due to insufficient or ineffective learning arrangements. Thus, for instance, there is a growing concern internationally that some students underachieve because their learning styles are not catered for (Genty et al., 2013; Subban, 2006; Kamuche, 2005). The learning style (LS), understood as the ways in which a person acquires, retains, and retrieves information, differs from person to person (Cuevas, 2016). The LS is directly related to the learning outcomes, hence lack of provisions for individual learning styles undermines the principle of equity and results in poor performance.

The concept of LS has been extensively explored, and numerous LS models (71 according to Pashler et al, 2009) have been constructed, based on different methods used to classify the students. Fleming's VARK model, for example, classifies students according to the sensory modality (visual, auditory, read and write, and kinesthetic) they prefer when learning (Kanchi et al 2013). Thus, a visual learner prefers pictures and learns best with visual images, such as diagrams and videos (Sreenidhi and Chinyi, 2017). Such learners also enjoy working in groups

and use teachers' non-verbal cues, such as body language, to help with understanding (Gilakjani, 2012). Auditory learners learn through listening. They like class discussions and lectures, are good at telling jokes and stories, and can also solve problems simply by talking about them (Kayalar and Kayalar, 2017). Read-write learners prefer printed words and text. They are note-takers, thus, study best through notes taken from lectures or reading materials (Drago and Wagner, 2004). Finally, the kinesthetic learners learn best when they do an experiment and are involved physically in the classroom experiences (Asrining and Safitri, 2017). They prefer learning through field trips, exhibitions, case studies, real-life examples, role-plays and applications.

For effective teaching, it is vital to consider students individual LSs, and a needs analysis in the classroom at the beginning of a new school year should be obligatory (Jumahir, 2018). This should be supported by a number of LS inventory tools, such as the Vermunt's Inventory, Kolbe Learning Style Indicator, Fleming's VARK Inventory, to mention a few (Coffield et al, 2004). Students' LS details should be integrated into their learning process (Hawkar, 2014) at the level of lesson planning, delivery and assessments (Wan, 2017), and should be provided for through a versatile teaching resource.

With reference to the above, context-based analysis of the nature and level of individual LSs provision is not only a key factor for efficient teaching in a particular school, but also a contribution to the development of differentiated teaching resources and didactics. The purpose of this case study is to explore and describe the extent to which teachers in one Seychelles school cater to students' learning styles. The analysis is pursued through the three research questions: 1. How do teachers perceive individual LSs provisions? 2. What arrangements do teachers make to cater to learners individual LSs in their practice? 3. What support do teachers get to implement differentiated teaching?

Method

This case study used a questionnaire and document analysis to collect the necessary data. The questionnaire was administered to teachers and elicited information about their understanding of the meaning of LS and the purpose of differentiated leaning, their teaching practices to cater to different LSs, and the nature and extent of support they received to provide for different LSs. In addition, six lesson plans and six assessment scripts (three for Mathematics and three for English) were analysed to provide evidence of teachers' differentiated learning arrangements in planned instruction and assessment, and, potentially, in their delivery.

School X is a two-stream Primary school with 30 teachers and 235 students. Over the years, the school has been labelled as an underperforming school. Three English Language teachers and 4 Mathematics teachers from Primary 3 to Primary 6, representing 23 per cent of the school population, were selected. Teachers from the above grades were chosen because at this stage the physical dependency of early childhood is over and students are more in control of their own learning. The study observed necessary ethical considerations at its every stage.

Findings

Analysis of the teachers' attitude to the place of LSs in the teaching process showed that 100 per cent of participants acknowledged its necessity and significance. The reasons given included the importance of the above for lesson planning, better catering to individual students' needs and choice of proper teaching styles. Further on, all teachers in the study claimed that they considered their students' LSs in their teaching. The most frequent reported ways of students' LSs identification (71 per cent) were engaging students in a discussion and observation of students performing a task. 43 per cent of teachers claimed to be getting feedback from parents and 14 per cent from other students. Next, all participants stated that they consider students learning styles when planning and delivering their lessons, but only 86 per cent consider students' learning styles in assessment. The teachers mentioned the following elements supporting differentiated teaching: a variety in learning activities including real-life ones, various teaching strategies, providing pictures and videos that relate to the topic, group work, providing some students with physical materials to manipulate to explore concepts, etc. To cater to students' LSs in assessment, teachers mentioned using pictures alongside text, incorporating different tasks on the assessment script or using a variety of written and oral activities.

Evidence from the teachers' lesson plans showed that alongside demonstrated variety of employed methods and resources, there is lack of their differentiation to cater to different LSs.

In fact, the lessons for both English and Mathematics were configured without proper provisions for kinesthetic learners, mainly catering for auditory (through explanations and discussions) and read and write learners (dictations and written tasks). Further on, though visual learners were catered for in plans for English lessons (using worksheets, pictures, and charts), plans for Mathematics lessons demonstrated the neglection of visual learners'. Notably, there were only individual tasks and no group work in both categories of plans. Also, only written assessments were given for both English and Mathematics. The fact that the participants were not catering to all the different learning styles in their planning suggests that they were not catering to the different learning styles in the lesson delivery either. Thus, absence of provisions for different learning styles in the teachers' plans contradicted the participants' claims of considering them in the lessons planning and delivery.

All participants claimed that they received support from the management and that the received support was adequate. 71 per cent mentioned that they receive support from other individuals (their colleagues, parents, UniSey lecturers) apart from school management, and 29 per cent claimed that they do not receive any additional support. The reported support from the management included advice on effective concept development and teaching strategies during team planning and team teaching.

Reported support adequacy is in conflict with the findings from the teachers' plans, revealing insufficient provision for differentiated learning and suggesting lack of such support. Demonstrated lack of LSs provisions in teachers' plans is also concerning given the qualification and professional exposure of teachers: most participants (71 per cent) had attended the teacher education/training programme before joining the teaching profession and should have been familiar with the concept. Besides, all the participants had teaching experience of either less than 10 years (57 per cent,) or more than 10 years (43 per cent). They should be fully aware of the importance of inclusion and differentiated learning emphasized in National Curriculum Framework (Ministry of Education, 2013) and should have been practicing such approach in their own teaching.

Conclusions and Recommendations

This study of the extent of consideration for students' different LSs in a particular school in the Seychelles has revealed a discrepancy between the teachers' perceived situation and the demonstrated reality. Though most teachers are sure that they know the concept and are successfully implementing it in their teaching, the teaching evidence demonstrates certain gaps and suggests insufficient arrangements for differentiated teaching based on various learning styles. Furthermore, though most teachers are sure that they are getting adequate support from different stakeholders (the school managers, colleagues, students' parents), the nature and the efficiency of this support is subject to discussion.

Despite the Ministry of Education encouraging the use of teaching approaches and methods that cater to the different learning styles as provided in the National Curriculum Framework (Ministry of Education, 2013), implementation of differentiated approaches can be problematic at the school level. This suggests the necessity of a more focused school-based revision and analysis of arrangements to consider individual LSs.

References

Asrining Tyas, P. & Safitri, M. 2017. Kinesthetic Learning Style Preferences: A Survey of Indonesian EFL Learners by Gender. *Journal of English Educators Society*, *2*(1), 53-64.

Coffield, F., Moseley, D., Hall, E., Ecclestone, K. 2004. *Should we be using learning styles? What research has to say to practice?* London, England: Learning & Skills Research Centre.

Cuevas, J. 2016. An analysis of current evidence supporting two alternate learning models: Learning styles and dual coding. *Journal of Education Sciences & Technology*, 6 (68), 1-13.

Drago, W. A. & Wagner, R. J. 2004. VARK preferred learning styles and online education. *Management Research News*, 27(7), 1-13.

Genty, R., Sallie. A. P., & Sanders, C. A. 2013. *Differentiated Instructional Strategies to Accommodate Students with Varying Needs and Learning Styles*. [Online]. Available at: https://files.eric.ed.gov/fulltext/ED545458.pdf . [Accessed 3 February 2021].

Gilakjani, A. P. 2012. Visual, Auditory, Kinesthetic learning styles and their impact on English language teaching. *Journal of Studies in Education*, 2 (1), 104-113.

Hawkar, A. A. 2014. Learning Styles and their relation to teaching styles. *International Journal of Language Linguistics*, 2(3), 241-245.

Jumahir, J. 2018. Identifying students learning style preferences at IAIN Ternate. *International Journal of Education*, 10(2), 121-129.

Kamuche, F. U. 2005. Do learning and teaching styles affect students' performance: An empirical study. *Journal of Business and Economic Research*, 3 (9), 35-40.

Kanchi, S., Junaid, A., Shenoy, N & Srikant, N. 2013. How different are students and their learning styles? *International Journal of Research in Medical Sciences*, 1(3), 101-104.

Kayalar, F. & Kayalar, F. 2017. The effects of Auditory Learning Strategy on Learning Skills of Language Learners (Students' Views). *IOSR Journal of Humanities and Social Science*, 22 (10), 4-10.

Ministry of Education, 2013. The National Curriculum Framework. Mahé, Seychelles. [Online]. Available at: http://www.education.gov.sc/aboutus/Documents/policies/Seychelles per cent20National per cent20Curriculum per cent20Framework per cent202013.pdf. [Accessed 11 September 2020].

Pashler, H., McDaniel, M., Rohrer, D., & Bjork, R. 2009. Learning styles in EEL. *International Journal of Applied Linguistics*, 11(1), 1-20.

Sreenidhi, S. K. & Chinyi, H. T. 2017. Styles of Learning Based on the Research of Fernald, Keller, Orton, Gillingham, Stillman, Montessori, and Neil D Fleming. *International Journal for Innovative Research in Multidisciplinary Field*, 3 (4), 17-25.

United Nation, 1989. Convention on the Rights of the Child. [Online]. Available at: https://www.ohchr.org/Documents/ProfessionalInterest/crc.pdf . [Accessed 10 September 2020].

UNESCO, 1994. *World Declaration on Education for All and Framework for Action to Meet Basic Learning needs*. Place de Fontenoy, Paris.

Subban, P 2006. Differentiated Instruction: A research basis. *International Education Journal*, 7(7), 935-947.

Wan, S. W.Y. 2017. Differentiated Instruction: Are Hong Kong in-service teachers ready? *Teachers and Teaching*, 23, 284–311.

Study 3.
Issues and Concerns in Implementation of Inclusive Education in Primary Schools in the Seychelles.

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Keywords: *Inclusive education, implementation, issues, concerns*

Introduction, Background and Aims

Like other democratic societies, the Seychelles education system is founded on two core principles: equity and inclusiveness. "Equity is a necessary condition in a society founded on the dignity of the person, the maintenance of a tradition of social harmony, and the recognition of the right of every citizen to contribute in a meaningful way to national development" (Ministry of Education, 2000: 4). It also incorporates the conditions for optimum achievement by every group, including the gifted, the slow learner and the learning disabled. 'Inclusiveness' emphasizes practices that provide equity in opportunity and access to resources for all learners (Ministry of Education, 2000). To promote these core principles in the education system, schools are encouraged to adopt instructional approaches, such as mixed ability teaching and differentiated instruction, and encourage the integration of learners with disabilities in the mainstream.

In 2009, Seychelles signed the *UN Convention on the Rights of Persons with Disabilities* (United Nations, 2007), which has brought a renewed interest and commitment to special education. Five years later, the *Special Needs Unit* was re-introduced in an effort to promote inclusive education (IE) in all state schools. Subsequently, *The Inclusive Education Policy* was drawn up in 2015 to address the issues and concerns relating to inclusion in schools in order to ensure equal opportunities for all learners.

The growing movement towards inclusion has inspired research into the implementation of IE in schools. Studies were conducted internationally (Mukhopadhyay et al, 2012; Dugassa & Sebeta, 2015; Buli-Holmberg & Jeyaprathaban, 2016) and in the Seychelles (Preira, 2005; Accouche, 2008, Jolicoeur, 2008). Among the studies conducted locally, only Preira investigated issues and concerns in meeting the needs of all pupils. Even if the IE policy was enacted in 2015, no studies have been conducted addressing implementation of IE in schools.

The above stated explains the significance of the present exploratory study, which aims at finding out the issues and concerns in the implementation of inclusive education in primary schools on Mahé, and which closes some empirical and contextual gaps left by previous researchers.

Method

A mixed methods approach was employed in this study, combining a questionnaire-based survey and observation documented in anecdotal records. Three schools, different in size, were purposively selected to reflect the diversity of schools in the Seychelles. All primary subject teachers, the head-teacher, the deputy, subject leaders and the Special Needs Coordinators (hereafter SENCos) in each of the selected schools participated in this study. The questionnaire was self-administered and collected data to investigate the three subsidiary research questions: 1. How is IE perceived? 2. How is IE practiced? 3. How is IE managed?

In addition, one primary three teacher from each of the selected schools was observed in action in a mixed ability class with diverse learners. Three 40 minute-lessons (Mathematics, English, Science) were observed in a primary three class in each of the three schools on three different days over one week. During the observation, the investigator noted the organization of the classroom and the presentation of learning experiences, types and ways of implementation of instructional methods and strategies, how learning was assessed and how feedback was provided. The researcher also noted types of teaching and learning resources and how these were used. The investigator also went around the schools to observe the suitability of facilities for IE, and looked out for any other indicators of inclusion, such as the presence of carers in classrooms and the interaction of teacher assistants with pupils. Ethical considerations were observed at every stage of this study.

Findings

How is inclusive education perceived in primary schools on Mahé?

Results from the survey show that most of the participants perceived inclusive education as pupils with and without disabilities learning together in the same educational setting. Participants had fair knowledge and understanding of IE and believed that it has been introduced in schools to bring about equity and ensure that no child is left behind. However, most of the participants (73 per cent) have not read the policy due to inaccessibility and lack of awareness of the existence of the document. The 24 per cent of respondents who have read the policy are mostly teachers who are following a Blended Learning Mode course at the Seychelles

Institution for Teacher Education. They had a module on inclusion which required them to read the policy. The survey responses also revealed the lack of sensitization, training and professional development sessions on IE in the schools. In addition, most participating teachers claim that they are trying to cater for the different ability groups in their classes, but large class size, inadequate resources and lack of support pose serious challenges.

How is inclusive education practiced in primary schools on Mahé?

Results from the lesson observations demonstrated that teachers did not implement IE in their classes as expected. Thus, whole class teaching predominated with no evidence of pupil-pupil interaction or differentiation of teaching approaches. Furthermore, the tasks given to pupils, though different in nature, were pitched at the average level for all three subjects observed and did not cater for all ability groups.

Teachers did, however, work in close collaboration with the SENCo. Teacher assistants in lower classes in all three schools were given the task of working with pupils who were struggling. The schools were, however, ill-prepared and under supported to accommodate pupils with physical disabilities. There were no signs of ramps that would give access to classrooms for disabled pupils and there were a lot of staircases in all three schools. Toilets in Small School and Medium School did not have showers. It can be concluded that schools are practicing exclusion rather than inclusion, and there were no facilities to accommodate pupils with disabilities.

Learners with special needs were also actively separated from the rest of the class. In some classes in Large School, pupils with disabilities were seated separately, especially if they had carers present, and in all three schools, pupils following IE programmes were removed from the classes for interventions by the SENCo.

How is inclusive education managed in primary schools on Mahé?

The outcomes of managing IE are rather negative. It is evident from the participants' responses that teachers do not have adequate training to manage an inclusive classroom. This could be attributed to the fact that IE was introduced as a module in teacher training in the year 2017 and by this time many of the teachers had gone through training. Teachers who were trained prior to this date have not received any academic input on IE.

Results also revealed that schools do not offer in house training or professional development sessions on IE at school level. This is a concern that should be addressed by school managers. Training, according to Walton et al (2009:109), is regarded as essential for the

successful implementation of IE Policy, with teachers needing not only knowledge and understanding of barriers to learning, but also practical training in teaching strategies that facilitate inclusion.

Furthermore, though *The Inclusive Education Policy* stipulates that the Ministry of Education shall appoint advisory teachers, educational psychologists, speech and occupational therapists, etc., so far these support mechanisms are not in place. Additionally, the Ministry of Education over the past five years has employed only two educational therapists, making it difficult to implement the strategic goal statement 'External support should be provided by resource personnel for teachers in 'inclusive classrooms' (Ministry of Education 2015: 22). Note, however, that Special Needs Coordinators have been appointed in all primary schools.

Results from the questionnaires also revealed that 29 per cent of the respondents noted that teachers with inclusive classrooms did not receive support services. Further, 56 per cent of the respondents reiterated that schools were not visited by regional-based support teams on a regular basis. A total of 68 per cent of the respondents maintained that their schools had inadequate resources to attend to pupils with learning problems. The majority of the participants (57 per cent), however, pointed to the fact that their management team monitored the implementation of IE, and to some extent, IE was discussed actively in the schools. On the other hand, the implementation of the IE policy did not feature in the strategic plans of any of the three schools, which suggests that this is not an area of priority in the schools studied.

Conclusions and Recommendations

Although the findings of this study cannot be generalized to all the schools in Seychelles, several issues and concerns relating to how inclusive education is perceived, practiced and managed in the three schools studied came into light.

A major issue which emerged from the discussion is that *The Inclusive Education Policy* remains obsolete in schools. Subsequently participants in the study have not read the policy, its content is more or less alien, and this is obviously a major barrier to its implementation. The above policy sets out the goals and objectives and provides detailed information on the roles and responsibilities of key partners, especially teachers, on how to make the classrooms inclusive. This includes how to deal with differences in learning abilities of the pupils, how to organize materials so that all pupils are catered for, and last but not least, how learning can be assessed.

If key stakeholders such as teachers miss out on such valuable information, they may find themselves in a very difficult situation to practice inclusivity. Even if teachers are in favor of

inclusion, the lack of knowledge and skills to make it happen in the classrooms thus becomes a major barrier to the implementation of IE.

Furthermore, general curriculum and lesson delivery recommendations provided by the Ministry can also be considered a hindrance, since they do not take IE into account. The lessons observed in three subjects in the three schools had close similarities in terms of delivery and the resources used. This suggests that teachers tend to rely too much on provided guidance documents provided by the Ministry of Education, and do not come up with innovative strategies to engage pupils in their learning. This attitude does not favor the implementation of the IE policy.

The main concern identified is that while the IE policy advocates inclusion, the schools are practicing 'exclusion'. This could strengthen barriers that impede the development of each individual to their fullest potential. Price (2018) and Haug (2017) observed that there seems to be a gap in policies and practice of inclusive education in some countries. The results from the three schools in the study corroborated these findings.

Another concern that this study raises is that the Ministry of Education seems to have failed in establishing the support structures and mechanisms that were to be put in place to support the implementation of the IE policy. Educational psychologists, speech and occupational therapists, etc. are still missing, and teachers feel that they are not being provided with training and continuous professional development to manage inclusion in their classrooms.

Walton et al., (2009:109) highlight the importance of training in the implementation of an inclusive policy and this is something that should be followed up. For the successful implementation of the policy teachers need training in teaching approaches for an inclusive classroom (collaborative approaches), they need training on how to adapt the curriculum to suit learners' needs, and also need to understand and implement alternative evaluation methods. They also need training on how to create the positive environment for inclusion. Without such knowledge implementation is difficult to achieve. In short, teachers need to be supported every step of the way and should be provided with continuous professional development.

Finally, of special concern is the observed the lack of knowledge among teachers of the relationship between inclusive education and differentiated teaching. Some teachers claimed that they were practicing differentiation in their classes, yet this was not observed in the lesson observations conducted. Most of the time, teachers did not incorporate any innovative strategies to involve the different pupils in the classrooms meaning that some pupils were left behind. This practice is not in conformity with recommended IE and the different activities that should be present in an inclusive classroom pedagogy mentioned by Booth et al. (2000).

In sum, we hope that the findings of this study can be used by education stakeholders to address the outlined issues and concerns. In addition, this study offers some frameworks and tools that may be considered by future researchers when investigating how IE is implemented in primary schools.

References

Accouche, M., 2008. *Inclusion of pupils with sensory and physical impairment in the mainstream schools: contrasting the views of parents and school staff*. Institute of Education university of Warwick.

Booth, T., Ainscow, M., Black-Hawkins, K., Vaughan, M., & Shaw, L., 2000. Index for inclusion: Developing learning and participation in schools. Bristol, UK: Centre for Studies on Inclusive Education.

Buli-Holmberg, J., Jeyaprathaban, S., 2016. Effective Practice in Inclusive Education. *International journal of special education.* 31, (1).

Dugassa, A., Sebeta, G., 2019. Special Needs Education Teachers college Ethiopia. *International Journal of Technology and Inclusive Education.* 8 , (1).

Jolicoeur, R., 2008. *An examination of the impact of de-streaming in teaching and learning in primary five in Seychelles schools*. Institute of Education university of Warwick.

Haug, P., 2017. Understanding inclusive education: ideals and reality. *Scandinavian Journal of Disability Research*. [Online]. 19, (3), pp.206–217. Available from: https://www.sjdr.se/articles/10.1080/15017419.2016.1224778/. [Accessed 19th March 2020].

Ministry of Education, Seychelles, 2000**.** *Education for a learning society policy statement of the ministry of Education Seychelles.* [Online]. Available from: http://www.education.gov.sc/aboutus/Documents/policies/Seychelles_Education_for_a_Learning_Society.pdf **.** [Accessed 6th May 2020].

Ministry of Education, 2015. *Inclusive Education Policy*. Ministry of Education: Seychelles.

Mukhopadhyay, S., Nenty, H. J., Abosi, O., 2012 Inclusive Education for Learners with Disabilities in Botswana Primary Schools. *SAGE Open* [Online]. Available from: Inclusive Education for Learners With Disabilities in Botswana Primary Schools (sagepub.com). [Accessed 20th March 2020].

Preira, V., 2005. *Meeting the needs of all pupils: issues and concerns for managers in primary schools in Seychelles.* MBA in Education Leadership (International).

Price, R., 2018. *Inclusive and special education approaches in developing countries*. Institute of Development Studies.

United Nations, 2007. *Convention on the Rights of Persons with Disabilities* [A/RES/61/106]. [Online]. Available from: https://www.un.org/development/desa/disabilities/annex-i-convention-on-the-rights-of-persons-with-disabilities.html. [Accessed 20th March 2020].

Walton, E., Nel, N., Hugo, A., Muller, H., 2009. The extent and practice of inclusion in independent schools in South Africa. *South African Journal of Education*. [Online]. 29, pp105-126. Available from: Elizabeth Walton | The University of Nottingham - Academia.edu. [Accessed 22nd March 2020].

Theme 2.
Supporting Learner Achievements

Study 4.
Does Leadership Training Make a Difference? - A Case Study of the Impact of Leadership Training on Curriculum Leadership and Student Performance in Six Seychelles Primary Schools.

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Keywords: *Competency Based Programme (CBA), middle leader, studies coordinator, subject leaders*

Introduction, Background and Aims

Quality leadership training for school leaders is one of the prerequisites for school success. The right training equips school leaders with the tools needed to lead and manage their schools and to contribute to the successful implementation of the curriculum. However, studies have revealed that the functions of school leaders are mostly oriented towards managerial roles and less towards pedagogy, something which may affect staff and student performance (UNESCO, 2016). In the efforts to improve the quality and the effectiveness of education, the leadership role thus requires further attention (Bush and Glover, 2013).

It is now widely accepted that high quality leadership is an important requirement if schools are to be successful (Bush and Jackson, 2002). This is particularly the case when implementing curriculum changes in order to improve educational outcomes, a complex task that necessitates a multifaceted approach that includes attention to aspects such as teaching and learning approaches, curriculum interpretation, assessment and leadership (OECD, 2010). Documented successful strategies for curriculum implementation include the establishment of structures to support teaching and learning, for example, a 'curriculum team' which focuses on means to integrate curriculum development, teacher development, and school organization development (Handelzalts et al., 2019).

When implementing major changes, such as those described above, the middle management tier of leadership has been recognized as a critical resource that needs to be involved in decision-making and policymaking (MacBeath, 1999). In the Seychelles, the position of middle leaders is uniquely placed to influence the quality of teaching and learning within their subject areas. Middle leaders' roles include acting as curriculum team leaders focused on improvements in teaching and learning. They thereby have powerful influence over

classroom practices, and are regarded as important gatekeepers for change and development within the subject (see Harris et al., 2001). Consequently, in the context of this study, "school leaders" includes headteachers, deputy headteachers, as well as studies coordinators (middle leaders).

Starting 2017, the Seychelles introduced a Competency Based Approach (CBA) to curriculum in order to improve learners' success. According to Mkonongwa (2018), CBA challenges traditional practice of focusing on coverage of the content. Instead focus lies on the mastery of skills and knowledge. CBA is also more learner-centred and recognizes learner diversity, and new evaluation practices that are more reliable, equitable, and relevant (Seychelles Ministry of Education, 2018). The implementation of CBA started in 2017 to complement school programmes in all six examinable primary subjects, including English and Mathematics.

This study examines the impact of leadership training of headteachers on curriculum leadership and student performance in Seychelles primary schools. One area of focus is on the relationship between headteachers and middle leaders who are more directly involved in the implementation of the curriculum. Research questions include: 1. how leadership training of headteachers impact the implementation of the CBA programme in Mathematics and English at key stage three in six primary schools of the Seychelles; 2. how Mathematics and Languages coordinators (middle leaders) are empowered to raise students' performance, and 3. the impact that leadership training has on students' attainment results.

Method

Six schools were selected based on the level of educational leadership training of the headteachers: two held a Master's of Business Administration in Educational Leadership (MBA) degree from 2005, two had an Advanced Diploma in Educational Leadership (ADEL), while the final two held a Bachelor in Education (B.Ed.). It should also be noted that the two headteachers with an ADEL and one with a B.Ed were enrolled in their last year of study for a Master's degree in Educational Leadership at the time of the study. Twelve subject coordinators, who collaborated closely with the headteachers in the curriculum implementation and oversaw teaching and learning of English and Mathematics, were also included in the study.

Both qualitative and quantitative analysis methods were used to assess the impact of leadership training. Firstly, semi-structured face-to-face interviews, based on a set of twelve open-ended questions on the topic areas of interest, were conducted with the six headteachers.

Secondly, a questionnaire survey, consisting of three sections examining: responsibility and training needs; leadership and management responsibilities; and, curriculum and attainment results, was administered to the twelve subject coordinators. Finally, student test score data for English and Mathematics from 2017 to 2019, obtained from the Examinations' Unit at the Ministry of Education, was used to calculate an overall measure of student performance in the selected schools. These attainment results were then analysed to assess whether students performed better in schools where headteachers had received more leadership training. Several ethical issues were considered including access and acceptance, informed consent, privacy and confidentiality.

Findings

With reference to the first research question, i.e. how leadership training of headteachers impacted the implementation of CBA, the headteachers pointed out that they had not been properly informed and trained regarding the CBA context and content. Consequently, they felt that they had limited influence on curriculum implementation overall, and they expressed several limitations when it came to leading and implementing the new curriculum in their schools. To compensate for lack of formal training, headteachers instead did their own research on the CBA, thereby gradually self-instructing themselves to better implement it.

Headteachers also expressed their concerns about the lack of centrally steered strategic directions in implementing the CBA programme. Instead, they had to make their own special provisions to ensure that middle leaders and teachers were assisted in discussing the content of the CBA. For example, professional development sessions for teachers had to be organised, something which also had a positive effect on teaching and learning, according to the interviewees. Headteachers also put great emphasis on the importance of collaboration, teamwork, good communication and the establishment of common goals in the curriculum implementation work. Here all the interviewed headteachers seemed to have adequate tools and competences to perform their duties.

The questionnaire responses from the subject coordinators also revealed the importance of collaboration and team planning for high-quality teaching and improved standards of achievement. Middle leaders found these types of collaborative practices beneficial since they could not only learn from the leaders, but also from each other and from teachers. Overall, it was felt that their involvement in decision-making about teaching and learning was encouraged and valued by the headteachers. Furthermore, mentoring, networking, and monitoring

structures in schools were all listed as efforts aimed at empowering and supporting these middle leaders to ensure that they led their departments effectively.

The findings from the questionnaires (and the interviews) revealed that especially the internal professional development sessions conducted in schools (so-called induction programs) provided the opportunity for middle leaders to learn more about CBA and its implementation. These programs used various strategies, such as peer observation, networking, coaching, professional dialogues and grooming, to empower middle leaders. Here, constructive feedback and sharing the school vision were also listed as additional sources of empowerment. In summary, the middle leaders affirmed that they received support and that they were empowered to help raise students' performance by their headteachers.

The final research question, i.e., the impact of leadership training on students' attainment results was less encouraging. The questionnaire responses revealed comprehensive intervention programmes to ensure that effective learning was taking place in the schools. These included the setting of individual targets monitored by teachers and middle leaders; learning discussions that allowed teachers and middle leaders to identify the needs of the students; structured administration and analysis of formative and summative assessments; and the implementation of clear intervention plans devised to address flaws when weaknesses were identified. Despite such structured leadership efforts, attainment results from the schools studied were discouraging, with overall low levels of principal passes. In addition, there seemed to be no correlation at all between the level of training among the headteachers and the attainment results in the respective schools (see Figure 1 below, for example).

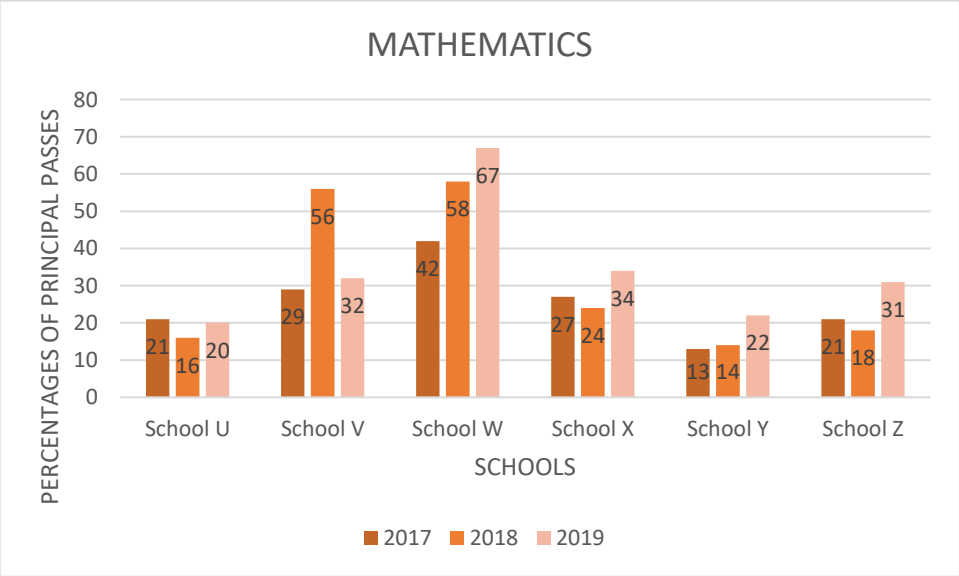

Figure 1. Principal passes in the subject of Mathematics in the investigated schools.
(Note that the headteachers of schools U and V are the most qualified, headteachers in schools W, X and Y have some training while the headteacher in school Z has no formal leadership training.)

Conclusions and Recommendations

It is evident that despite the difference in the level of leadership training of the headteachers, they are all actively involved curriculum development and have a certain influence on curriculum implementation in their respective schools. Transformational and instructional leadership styles are common among the headteachers to help in the transformation of the school community into a learning community, where everyone learns from each other. Headteachers, as curriculum leaders, generally see it is as necessary to empower middle leaders, who in turn empower teachers to lead their departments. Despite such comprehensive and enthusiastic implementation work, the strategies adopted do not necessarily seem to be aiding in improving students' performance. Attainment levels are generally low and leadership training seems to have little impact. According to OECD (2010) leadership training is not the only prerequisites for a school to be successful, and other factors have to be considered.

In spite of the partially discouraging results from this study, many of the efforts going on in schools are commendable and could be formalized and systematically applied to help prepare new leaders and middle leaders to carry out their responsibilities more effectively. These include:

- the creation of formal mentoring and networking programmes as a means to enhance leadership skills through the sharing of best practices;
- more efforts to make in-service training available in order to better equipped future leaders to manage tasks and lead people within their department;
- school leaders, in collaboration with the curriculum section of the Ministry of education, should lead the organization of more goal oriented in-service training for teachers, aimed at the systematic implementation of the CBA program within the different subject areas.

References

Bush, T. & Jackson, D. 2002. *A preparation for school leadership:* international perspectives, Educational Management and Administration, 30 (4) 417-429 Educational Management & Administration 0263-211X (200210) 30:4 417 SAGE Publications (London, Thousand Oaks and New Delhi) Copyright © 2002 BELMAS Vol 30(4) 417–429; 027839 [Online] Available at: https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.882.3586&rep=rep1&type=pdf [Accessed 16 June 2021]

Bush, T. and Glover, D. 2013. *School Leadership in West Africa:* Findings from a Systematic Literature Review. UNESCO Working Paper.

Handelzalts, A., Nieveen, N. and Van den Akker, J. 2019. Teacher Design Teams for School-Wide Curriculum Development: Reflections on an Early Study. *Collaborative Curriculum Design for Sustainable Innovation and Teacher Learning*, pp.55–82.

Harris,A., Busher,H. and Wise, C. 2001. Effective Training for Subject Leaders, *Journal of In-Service Education, Volume 27, Number 1,* [online] Available at: https://doi.org/10.1080/13674580100200139 [Accessed 23 April 2021].

Macbeath, J. (Ed.) 1999. *Effective School Leadership Responding to Change*. London: Paul Chapman Press.

Mkonongwa, L. M. 2018. *Competency-based teaching and learning approach towards quality education* Department of Educational Psychology and Curriculum Studies Dar es salaam University College of Education (DUCE) [Online] Available at: http://www.tenmet.org/wp-content/uploads/2018/12/Competency-based-teaching-and-learning-approach-towards-quality-education.pdf [Accessed 15 June 2021].

OECD, 2010. Improving Schools: Strategies for Action in Mexico. Executive Summary. [Online] Available at: https://www.oecd.org/education/school/47101323.pdf [Accessed 10 June 2021].

Seychelles Ministry of Education, 2018. EDUCATION SECTOR MEDIUM TERM STRATEGIC PLAN 2018 – 2022 AND BEYOND. [Online] Available at: http://www.education.gov.sc/aboutus/Documents/MTS_per_cent202018-2022_Final_per_cent20April_per_cent202019_per_cent20(1).pdf [Accessed 15 June 2021].

UNESCO, 2016. *School leadership is crucial to improvement in student learning*. UNESCO Office in Santiago [Online] Available at: http://www.unesco.org/new/en/media-services/single-view/news/unesco_school_leadership_is_crucial_to_improvement_in_stude/[Accessed 23 May 2020].

Study 5.
Influence of Teacher Characteristics on Academic Achievement of Learners in the Seychelles.

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Keywords: *Teacher characteristics, teacher age, teacher qualification, teaching experiences, ICT competency, learners' academic achievement*

Introduction, Background and Aims

In the public school debate, there is a lot of talk about what makes a good and a less successful teacher. Age, experience and qualifications are often listed as merits. The influence of teacher characteristics such as these on student academic achievement is a reoccurring topic in educational research internationally. Despite a plethora of studies on this topic, results, however, are inconclusive and vary greatly as to the observable teacher characteristics that have the most significant influence on learners' academic achievement (see Sancassani, 2021; Toropova, Johansson and Myrberg, 2019; Armstrong, 2015; Ekperi, 2018; Shah and Udgaonkar, 2018; Podolsky et.al, 2019; Sirait, A. 2016).

To the best of our knowledge, there have been no studies investigating the influence of teacher's characteristics on learners' academic achievement in the Seychelles to date. Given the general tendencies for the media and the public to hold teachers responsible for learner achievements/failures (under-achievements in national exams, for example), and to point to what makes a good or a bad teacher, a more systematic look at what teacher characteristics contribute to successful learning in the classroom is motivated. In response, this study investigates the correlation between learner achievement and teacher characteristics (age, experience, qualification, and ICT competency). The target group investigated are Primary 2 pupils and the subjects chosen are English and Mathematics. The Primary 2 level was chosen since this is a critical transitional stage, when medium of instruction, for example, switches from Kreol Seselwa to English. Also note that pupils take standardized national tests at the end of Primary 2. These test results were used as a measurement of achievement in this study.

Various frameworks have been used for defining and categorizing teacher characteristics. Kosgei, Mise, Odera and Ayugi (2013), for example, offer a two-dimensional framework encompassing 'personal characteristics' such as mental ability, age, gender, and 'experiential

characteristics' such as certification status, educational background, and previous teaching experience. Of these characteristics, teacher age has been identified as a key factor affecting student achievement. Research has shown that older teachers are more knowledgeable, (Shah and Udgaonkar, 2018, p.2438), more enthusiastic about teaching (Ünal and Ünal, 2012), and more capable of recognizing where to tap into students' potential in order to enhance students' attainment than younger teachers (Nyagah and Gathumbi, 2017; Alufohai and Ibhafidon, 2015; Aloka and Bojuwoye, 2013). However, some research has shown that older teachers struggle to keep up with modern pedagogical development such as ICT skills (Ismail et.al, 2018). Also note that findings vary and that some studies have actually failed to show that age is of importance (see Sivasakthi and Muthumanickam, 2012, for example).

Experience is closely related to age. Again, several studies have shown a positive correlation between experience and student attainment (see Putman, 2012; Ewetan and Ewetan, 2015, for example). Results from other studies give a different picture. Aaronson, et al (2007), for example, note that experience has seems to have little effect on classroom results.

Qualification is another well researched variable in this field. Research has shown that qualified teachers can better distinguish the teaching method that fits the students' learning style for meaningful achievement (Okopala, 2019; Manning et al., 2017), and many studies have found a positive correlation between teacher qualification and student academic achievement (e.g., Unanma et al., 2013; Akinsolu, 2010). Again results vary, however, and Piro et al. (2010) found that teachers' certification status had no significant impact on students' achievement in standardized tests.

New technologies offer wider scope for teaching pedagogies but place additional stresses on teachers to develop ways to incorporate these new technologies in their instructional practices. Studies investigating teacher ICT experience/knowledge on student achievements are also contradictory. Rodríguez, Nussbam and Dombrovskaia (2013), for example, found that it has a positive effect on students' academic performance, whereas Karamti, 2016 and Webbink et al., 2004 could show that ICT experience affected students' performance negatively. The latter studies may have reflected the importance of pedagogical considerations guiding the introduction of ICT in the classroom.

Method

Five schools comprising three medium-sized and two small-sized schools were chosen for the study. All five schools take the standardized test that is prepared and administered nationally to assess learners' academic achievement at the end of the Early Childhood level. Questionnaires were sent out to all teachers (n=13) that teach P2 learners (n=267). Items of the questionnaire included self-evaluations about the teachers' characteristics including age (>30 and <30), qualification (Certified and Uncertified), experience (<5, 5-10, >10 years), and ICT competency (Low, Average, and High). Data relating to learners' academic performance were collected from the national tests, which were all graded on a scale from 0-100. Descriptive statistics, mostly frequency and mean, were employed to obtain students' mean score and level of academic performance, while inferential statistics (ANOVA and Kruskal-Wallis test) were employed to test the strength of relationship between each of the teacher characteristics and students' academic performance.

Findings

Each of the characteristics investigated were tested separately using ANOVA modelling (which compensated for background variables). Age did not show to have any significant effects on achievements in the subjects of English or Mathematics. There was a slight tendency for pupils taught by older teachers (30+) to produce higher scores than those taught by younger teachers, but the differences were slight and not statistically significant. These results corroborate Sivasakthi and Muthumanickam's (2012) study, which failed to show that age had an impact on learner achievement.

Years of experience did have a significant effect on learner achievements, however. In the subject of English, there was a significant tendency for learners of teachers with ten years of experience or more to produce higher scores (mean score = 64 per cent) than learners taught by teachers of 6-10 years' experience (mean score = 58 per cent) and 0-5 years' experience (mean score = 57 per cent). There were however no such significant differences in the subject of Mathematics, although there was a slight tendency for learners of more experienced teachers to produce better scores. This finding is supported by previous research, which has shown that teachers' experience has a significant impact on learner achievement (see Putman, 2012; Ewetan and Ewetan, 2015).

Teacher qualifications seemed to have no significant effect on learner achievement. There was a slight tendency for learners taught by qualified teachers to produce somewhat higher scores in both subjects, but this difference was not significant. This is comparable with Piro et

al. (2010), who found that teachers' certification status had no significant impact on students' achievement in standardized tests.

Interestingly, there was a negative correlation between ICT competency and learner achievements. Learners taught by teachers who claimed to have high ICT competency scored significantly lower in the subject of Mathematics (mean score = 32 per cent) than teachers of average competency (mean score 41 per cent) and low competency (46 per cent). No such tendencies were found in the subject of English. This finding was rather unexpected but confirms the complexity of using ICT in the classroom, and that this includes many pedagogical considerations. The use of ICT alone does not seem to have a positive impact (compare Karamti, 2016 and Webbink et al., 2004 above). The results are summarised in Table 1 below.

Table 1. Summary of Results

Characteristics	**Results**	**Comment**
Age	Not significant	Very slight tendency for learners of older teachers to produce better scores in both subjects
Experience	Significant	Pupils taught by the most experienced group of teachers scored significantly higher in English, but not in Mathematics.
Qualifications	Not significant	A slight, but insignificant tendency for learners of qualified teachers to produce better scores.
ICT competency	Significant	Learners of teachers who claimed to have low and average ICT competency scored significantly higher in the subject of Mathematics than learners taught by teachers who claimed to have high ICT skill levels. No such differences were found in the English scores

In summary, the results corroborate many previous studies in that they are quite inconclusive.

Conclusions and Recommendations

The main purpose of the study was to determine the teacher characteristics that mostly influence students' academic performance and to determine whether their influences are significant or not in English language and Mathematics at Primary 2 level. Following the findings on the four teacher characteristics (age, qualification, experience, and ICT competency) investigated, it was found that the variable teachers experience in particular had a significant impact on students'

academic achievement in English. ICT competency, however, seemed to have a negative impact students' academic achievement in Mathematics.

This study is inconclusive in many respects. This may be a result of the relatively small number of teachers that were included in the study. The study does, however, point to the importance of teacher experience on learner achievements. There are thus good reasons for the Ministry of Education to ensure that teachers stay in the profession and that concerted efforts are made to make the profession attractive.

References

Aaronson, D., Barrow, L. & Sander, W. 2007. Teachers and student achievement in the Chicago Public High Schools. *Journal of Labor Economics,* 25 (1), 95-135.

Akinsolu, A. O. 2010. Teachers and students‟ academic performance in Nigerian secondary schools: Implications for Planning. *Florida Journal of Educational Administration and Policy*, 3(3), 86-103.

Aloka, P .J. O & Bojuwoye, O. 2013. Gender, age and teaching experience differences in decision making behaviours of members of selected Kenyan Secondary school disciplinary panels. *Asian Social Sciences,* 9 (10), 43-55.

Alufohai, P. J. & Ibhafidon, H. E. 2015. Influence of teachers' age, marital status and gender on students' academic achievement. *Asian Journal of Educational Research,* 3(4), 60-66.

Aristovnik, A. 2021. The impact of ICT on Educational Performance and its Efficiency in Selected EU and OECD countries: A non – parametric analysis. *The Turkish Online Journal of Educational Technology*, 11(3), 144-152.

Armstrong, P. 2015. Teacher characteristics and student performance: An analysis using hierarchical linear modelling. *South African Journal of Childhood Education*, 5(2), 123-145.

Ekperi, P. 2018. Impact of Teacher Characteristics on Students' Academic Performance in Public Secondary Schools. *International Journal of Research and Innovation in Social Science*, 2(7), 514 – 585.

Ewetan, T.O. & Ewetan, O. O. 2015. Teachers' Teaching Experience and Academic Performance in Mathematics and English Language in Public Secondary Schools in Ogun State, Nigeria. *International Journal of Humanities, Social Sciences and Education,* 2 (2), 123-134.

Fatma, S. & Tugay, A. 2015. An evaluation of classroom management skills of teachers at high schools (Sample from the City of Adana). *Procedia - Social and Behavioral Sciences,* 191, 208 – 213.

Ismail, R. A. M., Arshad, R. & Abas, Z. 2018. Can Teachers' Age and Experience influence Teacher Effectiveness in HOTS? *International Journal of Advanced Studies in Social Science & Innovation*, 2(1), 144-158.

Karamti, C. 2016. Measuring the Impact of ICTs on Academic Performance: Evidence from Higher Education in Tunisia. *Journal of Research on Technology in Education*, 48(4), 1 - 16.

Manning, M., Garvis, S., Fleming C. & Wong, G.T.W. 2017. The relationship between teacher qualification and the quality of the early childhood education and care environment. Available from: https://doi.org/10.407/csr.2017.1. [Accessed 15 July 2021].

Nyagah, G & Gathumbi, A. 2017. Influence of teacher characteristics on the implementation of non-formal basic education curriculum at the non-formal education centres in Nairobi, Mombasa and Kisumu Cities, Kenya. *International Journal of Education and Research*, 5(1), 207-221.

Piro, J. Shutt, T. & Stewart, G. 2010. Value Added Student Achievement in Alternative and Traditional Teacher Preparation Pathways. *Journal of Administration in Higher Education*, 6(2), 5-6.

Podolsky, A., Darling-Hammond, L. & Kini, T. 2019. Does Teaching Experience Increase Teacher Effectiveness?A review of US Research. Journal of Professional Capital and Community, 4(4), 1-23.

Putman, S.M. 2012. Investigating teacher efficacy: Comparing pre-service and in service teachers with different levels of experience. *Action in Teacher Education*, 34, 26–40.

Rodríguez, P., Nussbaum, M. & Dombrovskaia, L. 2012. ICT for education: A conceptual framework for the sustainable adoption of technology-enhanced learning environments in schools. *Technology, Pedagogy and Education*, 21(3), 291-315.

Sancassani, P. 2021. The effect of teacher characteristics on students' science achievement. IFO Working Paper, No. 348, IFO Institute - Leibniz Institute for Economic Research at the University of Munich, Munich.

Shah, S. R., & U.S, Udgaonkar. 2018. Influence of Gender and Age of Teachers on Teaching: Students Perspective. *International Journal of Current Microbiology and Applied Sciences*, 7 (1), 2436 – 2441.

Sirait, A. 2016. Does Teacher Quality Affect Student Achievement? An Empirical Study in Indonesia. *Journal of Education and Practice*, 7(27), 34-41.

Sivasakthi, R. T. & Muthumanickam, R. 2012. A study on the teacher effectiveness of school teachers. *International Journal of Current Research*, 4(2). 222-226

Toropova, A., Johansson, S. and Myrberg, E. 2019. The role of teacher characteristics for student achievement in mathematics and student perceptions of instructional quality. *Education Inquiry*, 10(4), 275-299.

Ünal, Z. & Ünal, A. 2012. The Impact of Years of Teaching Experience on the Classroom Management Approaches of Elementary School Teachers. *International Journal of Instruction*, 5(2), 41-60.

Unanma, A.O., Abugu, H.O., Dike, R.C. & Umeobika, U.C. 2013. Relationship between teachers' educational qualifications and student's achievement in chemistry: A case study of Owerri West LGA. *Journal of Research and Method in Education*, 1(1), 5-10.

Webbink, D., Oosterbeek, H., Lindahl, M. & Leuven, E. 2004. The Effect of Extra Funding for Disadvantaged Pupils on Achievement. *IZA Discussion Paper. No. 1122*. Bonn: Institute for the Study of Labour. Available from: file:///C:/Users/amvid/Downloads/SSRN-id542462.pdf [Accessed 1 July 2021].

Study 6.

Low Self-esteem: A Challenge Hindering Student Progression and Practical Advancement. A Case Study of the Seychelles Tourism Academy.

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Keywords: *low self-esteem, professional education, tourism industry*

Introduction, Background and Aims

Self-esteem is understood as an individual's overall positive assessment of oneself, which can be exhibited on a high level, when individuals respect themselves and believe that they deserve respect from other people, or at a low level, when people suffer from feeling insignificant, lonely uncertain, resulting in overall discontentment with their life (Mruk., C. 2006). Having high self-esteem is a crucial component for service providers in the tourism industry, as it facilitates the development of relationships between customers and service providers, and enables service excellence that meets customers' expectations – a vital component, and an acknowledged condition of business success (Major and Evans, 2008).

The hospitality and tourism industry faces multiple challenges in attracting and retaining quality employees that possess the required soft skills on top of technical skills that are in line with industry trends and demands (Baum, 2007). This is especially important for young future employees, for example apprentices and students, to be aware of. Current critical industry concerns that are gaining importance include higher order skills and competences, such as communication (Major & Evans, 2008).

With this in mind, the relationship between low self-esteem and learning aspects of young people becomes a vital research topic, as illustrated by several studies. For example, Emler (2001) reports correlations defining the possible relatedness between low self-esteem in adolescence and low performance in technical and vocational fields. Kwek et al. (2013) explore the impacts of self-esteem and resilience factors on the academic performance of international students compared to domestic Australian students, and Caraway et al. (2003), have analysed self-efficacy, goal orientation, and fear of failure as predictors of school engagement in high school students.

As education situations are defined by culture and various socio-economic factors, more country-specific research on low self-esteem in prepartion of professionally oriented students is a key for understanding this problem in the context of the Seychelles. The Seychelles Tourism Academy's mandate is to train and develop a highly skilled tourism and hospitality work force, which can respond to the industry's current needs. Hence, special attention is paid, not only to academic or vocational aspects of learning, but also to the development of personal skills relevant for the profession. Unfortunately, regardless of the efforts made by the Seychelles Tourism Academy to support students, many of them lack self-esteem, resulting in demonstrated panic, stress and shyness, especially during practical sessions. Such behaviours are exhibited by students across all programmes and is becoming an ongoing concern.

This study aims to explore the extent to which students' low self-esteem affects their ability to handle practical components of their training for tourism and hospitality careers in the Seychelles, with Seychelles Tourism Academy as the leading providor of vocational education in the field. Focusing on manifestations, causes and implications of students' low self-esteem for their practical training and further professional success, the study contributes to a better understanding of the concept of self-esteem as an element of professional education. The first objective of the study is to identify and describe the factors causing manifestations of low self-esteem among students following technical and vocational programmes at the Seychelles Tourism Academy. The second objective is to understand the problems and challenges students encounter due to low self-esteem. Thirdly, the paper identifies strategies to improve students' self-esteem.

Method

A mixed method research approach was employed in this study, incorporating: a survey, practical training session observations, and a focus group interview with tourism professionals and technical lecturers working directly with the students in the industry.

The study was conducted with a total of 28 selected students (12 per cent of the overal population (240) of Advanced Certificate students in both the first and second years of their studies. These students were selected from a larger population of around 70 Advanced Certificate students, using an observation checklist (based on Guindon, 2002)) containing 13 signs and manifestations common in people who have low self-esteem. The low self-esteem descriptors included: feeling nervous and showing signs of anxiety, difficulty focusing and concentrating, fatigue and/or tiredness, restlessness, loss of speech, inappropriate body language, unclear and confusing speech, poor eye contact with audience, lots of hesitation, trembling, reluctance to questions, breathing heavily, and ignoring others. Students exhibiting

more than five of the signs and manifestations of low self-esteem during practical sessions were selected to participate in the survey.

The survey was carried out through a structured questionnaire addressing challenges the students faced when going though a low self-esteem crises and their perceptions of factors leading to low self-esteem. Furthermore, an interview was conducted with a group of 15 tourism professionals, functioning as field supervisors, and 2 technical lecturers, to elicit their opinions and suggested methods to help foster and boost up students' self-esteem, something the academy can implement or incorporate in the curriculum. The study was conducted on the academy's campus. Confidentiality, consent and anonymity were respected and maintained throughout the research process.

Findings

The factors causing manifestations of low self-esteem

The research sample demonstrates that demographics can be a factor in low self-esteem. Thus, the fact that out of the total of the selected 28 participants, 82 per cent were female and 18 per cent were male, suggests that female students are more prone to low self-esteem than male students. Furthermore, most of the participants (68 per cent) being younger than 17 indicates that the low self-esteem may be age sensitive, and more often manifested in younger people. The fact that the majority of the participants (61 per cent) were in Year 1, with the rest of the sample (39 per cent) being in Year 2, points to the fact that low self-esteem may be more typical for students in earlier years of studies.

As far as the life circumstances were concerned, all participants agreed that anxiety and unsupportive parents and guardians are main factors that can lead to the development of low self-esteem. Other leading factors identified by 93 per cent of the participants included bullying, loneliness, and stressful life events such as divorce or moving houses. The less significant factor leading to low self-esteem found in this study was ongoing medical issues. Only 32 per cent of the respondents maintained that this factor was influential.

Problems and challenges students encounter due to low self-esteem

The feedback from students' supervisors and lecturers yielded several problems resulting from low self-esteem, which in turn can hinder their professional development. Thus, for instance, low self-esteem students are often incorrectly judged as not interested in their job. Many of them were reported to change their field of work and move to a job where they feel more comfortable as they do not need to face customers. Such change of occupation can be considered as a waste of professional training received by the students at the Tourism Academy.

Furthermore, students with low self-esteem lose out on instruction, as they are scared to approach their supervisors and other working colleagues to ask questions or seek clarifications. The above negative tendencies of demonstrated low self-esteem in students at the workplaces is in conflict with the business-oriented norms in hospitality establishments that cannot "afford babysitting' students", and consider the development of job-related skills a more important task than student counselling. As a result, low self-esteem students lose in the efficiency of practical training during the work placement as they are kept in the backstage of operations, being given lower-level tasks, such as washing up and cleaning plates and cutlery. Such functional limitations prevent the students from developing skills and implementing their knowledge, thereby negatively impacting on future employability.

Strategies to improve students' self-esteem

The suggested strategies to help students overcome their low self-esteem can be grouped in two categories: those which relate to the students' placement, and those which refer to curriculum changes. For the first category, students should be given more freedom in choosing particular areas of specialisation during internship. This can be supported by initial rotation between departments for a better understanding of the nature of their operations. Secondly, students' exposure to the industry should be maximised and extended to earlier stages of their time at the academy. The above can be supported by simulation of the field environment on campus, for instance, through shift and odd hours' timetable, and selling the practical services to external clients rather than restricting them only to students and staff. Field related events and activities should also be included in these early stages.

Initiatives which referred to curriculum changes included the introduction of modules that address soft skills, interpersonal skills, attitudes, self-reflection and self-discipline. Practical practices such as greetings, voice pitch etc. were also suggested. These suggestions also included role-plays and simulation classes where students are given time to work on their weaknesses. More sessions delivered by professionals were also recommnded, as were systems of appraisals identifyling low self-esteem students during early stages, and giving them support.

Conclusions and Recommendations

This study has shown that low self-esteem in students in Tourism is not only a personal issue, but a negative factor for the industry development in general. During their work placement, students with low self-esteem tend to hold back and do not develop their job-related skills. Moreover, many of them choose to change the career and switch to occupations where they do not have to deal with clients, thus, wasting the received professional training. Even when staying in the industry, low self-esteem students fail to be efficient enough in providing quality service.

Given the detrimental effect of low self-esteem for the tourism and hospitality students' potential, it is crucial to provide them with relevant support. The suggested strategies and initiatives addressed various aspects of students training process. First, students should be given more freedom in choosing their specification for job placement. Their motivation and interest can boost their performance, while lack of interest, on the contrary, will lead to underachievement and will contribute to further low self-esteem. Second, during the students' training programme, their connection with the industry should start as early as possible through a simulated professional environment at the academic institution, and through the work placement. There should be more collaboration between the academy and the tourism and hospitality industry to better prepare students for the world of work. This can be done through establishing stronger guidelines and Memorandas of Understanding to maximize exposure of both lecturers and students to what is happening in the industry, and to keep them up to date with the changes, innovations and trends of the industry. This will enable students to be more aware of what is expected from them in the industry and will ease the stress, fear and uncertainty of what is to come. Next, more teaching modules should be offered dealing with issues prompting low self-esteem in students.

In sum, the above findings about low self-esteem students can be taken into consideration by lecturers, managers of teaching institutions, policy-makers and industry stake-holders in the provision of consistent support structures for low self-esteem students during their training period.

References

Baum, T. 2007. *Skills and the hospitality sector in a transition economy: The case of front office employment in Kyrgyzstan*. [Online]. Available at: https://www.researchgate.net/publication/232857415_Skills_and_the_Hospitality_Sector_in_a_Transition_Economy_The_Case_of_Front_Office_Employment_in_Kyrgyzstan. [Accessed 4th November 2020].

Caraway, K., Tucker, C. M., Reinke, W. M., & Hall, C. 2003. Self-efficacy, goal orientation, and fear of failure as predictors of school engagement in high school students. *Psychology in the Schools*, 40, 417–427.

Emler, N. 2001. *Self Esteem: The Costs and Causes of Low Self Worth*. York: York Publishing Services.

Guindon, M. H. 2002. Toward accountability in the use of the self-esteem construct. *Journal of Counseling & Development*, *80*(2), 204–214. [Online]. Available at: https://doi.org/10.1002/j.1556-6678.2002.tb00184.x. [Accessed 4th November 2020].

Kwek, A., Bui, H., Rynne, J., Kam Fung So, K. 2013. *The Impacts of Self-Esteem and Resilience on Academic Performance: An Investigation of Domestic and International Hospitality and Tourism Undergraduate Students*. [Online]. Available at: https://www.researchgate.net/publication/259562235 [Accessed 15 October 2020]

Major, B., Evans, N. 2008. Reassessing Employer Expectations of Graduates in UK Travel Services. International Journal of Tourism Research, 10(5), 409-422.

Mruk., C. 2006. Self-Esteem Research, Theory, and Practice: Toward a Positive Psychology of Self-Esteem. Springer Publishing Company, Inc. [Online]. Available at: http://library.uc.edu.kh/userfiles/pdf/4.Self-esteem per cent20research per cent20theory per cent20and per cent20practice per cent20 per cent20toward per cent20a per cent20positive per cent20psychology per cent20of per cent20self-esteem.pdf [Accessed 15 October 2020]

Theme 3.
Family Involvement

Study 7.
Family Involvement in Children's Learning – A Case Study of its Nature, Context and Impact on Primary Level Academic Performance.

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Keywords: *Family Involvement, Children's Learning.*

Introduction, Background and Aims

The Seychelles government has placed renewed emphasis on improving family values and education as being a 'shared responsibility'. It is thus important to identify the roadblocks that impact on parents' participation in their children's formal education (Sapungan and Sapungan, 2014). Numerous studies exist on family involvement and its related effects on the student's academic achievement. The main question is whether parents/families play a role or not in how their children perform at school, and if so, in what way. To what extent the degree of involvement affects children's performance is also of interest. In response to these queries, the current study aims to provide important evidence to evaluate family involvement and its impact on students' academic performance. The study also provides a baseline to measure on how involved parents are in their children's education, and correlates this against parents' educational levels/backgrounds.

Results from various studies mostly indicate that family involvement is a decisive factor affecting learner achievement. Voorish, Maier, Epstein et al. (2013), for example, were able to show that family/parental involvement was integral for the success for young children concerning mathematical skills and literacy. Similarly, Kimaro and Machumu (2015) found a positive correlation between student performance and parental support. Wilder (2014), who also found a positive correlation between the academic achievement of students and parental involvement, could show that this general positive correlation remained, regardless of which definitions were used for parental involvement or which ways were applied to measure achievement. However, a stronger correlation was observed between involvement and achievement when 'involvement' was defined as parental expectations, and a weaker correlation when it was defined as homework assistance. This research thus suggests that the

type, as well as the amount, of family involvement is critical when studying family influence on learners' academic achievement.

Various background factors too seem to be of importance when considering family involvement. For example, Kohl, Lengua, and McMahon (2000) were able to show that secondary factors such as the parents' education level, maternal depression and family status (single or married) all played significant roles in determining the degree of family involvement in school. Active collaboration between the family and the school context has also been pointed out as a success factor by several researchers. For example, Voorish, Maier, Epstein et al. (2013) noted that family involvement in the school studied generally was weak, but that when present, there was a strong positive correlation with this variable and the students' academic achievement. They could also show that parents from diverse backgrounds were responsive to efforts by the school to increase the engagement, and that this in turn led to an increase in the performance of the respective children. Kohl, Lengua, and McMahon (2000) have also pointed to the fact that when parents and teachers develop a good mutual understanding, and work towards the same goals, it benefits the child's progress. Wilder (2014), however, cautions that though parents can help, they have not been trained as teachers, and Gonida, and Cortina (2014) warn that total parental control can be disadvantageous to the learning progress.

These different findings were considered in this study, where the aims include evaluating the impact of family involvement on learners' achievement, gaining a better understanding of what constitutes family involvement in Seychelles, and what factors affect this involvement. The ultimate ambition is to help inform schools to choose the most effective and appropriate ways to improve the overall relationship with parents/family, and to increase their respective impact on the outcomes of the learning of their children.

Method

A mixed methods approach was used to gather data from parents and guardians (n=115) and their children (n=115) in five Primary 5 classes in a school in the Seychelles. Five class teachers were also included in the study.

Prior to the actual data collection, nine parents and the five teachers participated in a focus group discussion aimed at identifying the different dimensions of family/parental involvement in the Seychelles context. These dimensions were then used to formulate questionnaires sent out to all the parents asking about family involvement. Learners were also given questionnaires which were adapted for this target group.

Using the data gathered from the questionnaires, the correlation between family involvement and learner achievement were assessed using Chi Squared Analysis and Pearsson Correlation index. Note, that Family Involvement was graded on a three-level mean scale (low, medium or high), estimated on the basis of responses to various questions included in the questionnaires. Learner Achievement was based on a mean estimate of the performance in the end of term Primary 5 exams. Five achievement categories were included: Advanced: 80-100 per cent (n=0); Proficient: 60-79 per cent (n=22); Intermediate: 40-59 per cent (n=40); Basic: 20-39 per cent (n=37); and U: 0-19 per cent (n=16).

To complement and triangulate the questionnaire data, qualitative data was collected through semi structured interviews with ten parents and the five primary five teachers.

Findings

Firstly, the focus group discussion, aimed at generating a list of dimensions of parental involvement in the Seychelles, identified several dimensions. These were ranked according to perceived importance as follows: 1. communication with the school; 2. attending meetings and class committees; 3. keeping abreast with the school programme and the curriculum; 4. ensuring attendance and punctuality; 5. providing for adequate stationery and resources; 6. checking on children's performance and behaviour; 7. assisting with homework and study planning; 8. discussions with children on learning progress; and 9. volunteering and supporting the school.

The questionnaire responses from parents revealed that the majority of respondents were female (93/115), and single parents (55/115). Other family constellations consisted of married couples (36/115) and 'others', mainly made up of legal guardians and close relatives such as grandparents (24/115). Of the 115 parents and guardians included in the study, 82 indicated

that they had sole responsibility for the child. Most of the respondents had some form of post-secondary education. The specific levels of education are summarized in Figure 1 below.

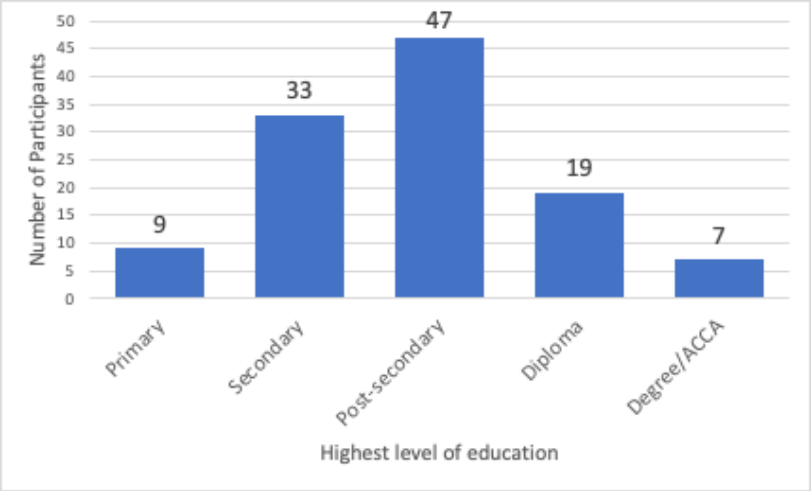

Figure 1. Level of education of participants

Analyses of the correlations between parents' characteristics and learner achievement did not show any significant correlation between parents' level of education, marital status or gender and learner achievement. There was a slight tendency for learners with well-educated parents to achieve higher grades, but this was not significant. Analysis of the correlation between parent involvement and learner achievement did however reveal a significant positive correlation ($p = 0.03$). Learners with grades U and Basic were overrepresented in the low involvement group of parents/guardians whereas as learners with grades Intermediate and Proficient were overrepresented in the high involvement group. It thus appears that high family involvement has a positive effect on learner achievement, regardless of background variables such as the education or marital status of the parents/guardians.

The qualitative results from the interviews were relatively encouraging. The majority (4/5) of the interviewed teachers were satisfied with the level of communication they had with the parents, and all felt that they had good relationships with the same. All teachers interviewed were also happy with the efforts that the school leadership put into involving parents in school activities. Teachers were however less impressed by the level of parents' attendance and involvement in meetings (class meetings, curriculum meeting and general meetings), and other activities organized by the school. A majority (3/5) indicated that they were dissatisfied with this. Teachers were also dissatisfied with the level of interest that parents showed in curriculum matters. On the whole teachers were reasonably satisfied as regards practical issues of parent involvement such as punctuality, making sure homework was done on time, and that

educational material such as school bags etc. were brought to school. Two of the five teachers indicated that they would have liked to see more efforts from parents on checking up on their child's performance.

The interviews also revealed that the teachers used several channels to communicate with parents, such as phone calls and WhatsApp, but that all teachers combined this with face-to-face meetings. There was also a general sentiment expressed that parents need to change their mindset and to stop believing it is only the teachers' responsibility to take care of their child's education. When asked what to do in order to involve parents more, two teachers suggested keeping the class committees more active and also facilitating participation by organizing meetings and other activities after working hours.

Parent interviews revealed that all parents acknowledged the importance of being involved in their children's education. However, a majority of the respondents pointed out that the main hindrance to participation was job demands and difficulties to be released from their job to attend school activities. A few parents also alluded to the fact that a lack of education might dissuade a parent from attending school activities as they would be uncomfortable conversing with the teachers about topics being taught.

Conclusions and Recommendations

The study shows that parental/family involvement has a positive impact on learning. Despite its limitations, we venture to give some recommendations that can be of benefit to the Ministry of Education. Firstly, based on the general findings of this and other studies, we see clear benefits in sensitizing and empowering parents to become more involved in their children's learning. Parents need to be given the tools on how to become more reflective and to evaluate themselves on how they can support their children. Secondly, we recommend that the Ministry of Education should work in partnership with the Ministry of Family Affairs and the Ministry of Employment to design a policy for flexible working hours for parents that are having difficulty to balance their working schedule with their child/children's schooling. Last, but not least, we see it important that the Ministry of Education and school leaders explore ways of how they can better their support to parents who are taking sole responsibility for their children; the vast majority of the parents/guardians in this study were after all single.

References

Gonida, E.N. and Cortina, K.S., 2014. Parental involvement in homework: Relations with parent and student achievement-related motivational beliefs and achievement. *British Journal of Educational Psychology*, *84*(3), pp.376-396. Available from: https://deepblue.lib.umich.edu/bitstream/handle/2027.42/108320/bjep12039.pdf?sequence=1[Accessed on 30 June 2021].

Kimaro, A.R. and Machumu, H.J., 2015. Impacts of parental involvement in school activities on academic achievement of primary school children. *International Journal of Education and Research*, *3*(8), pp.483-494. [online] Available from: https://pdfs.semanticscholar.org/5ce2/302a9033a8e75b8086b2679a8686b13956b4.pdf?_ga=2.178974499.682757321.1583999905-268888886.1574667853 [Accessed Friday 13th March 2020].

Kohl, G.O., Lengua, L.J. and McMahon, R.J., 2000. Parent involvement in school conceptualizing multiple dimensions and their relations with family and demographic risk factors. *Journal of school psychology*, *38*(6), pp.501-523. [online] Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2847291/ [Accessed Friday 13th March 2020].

Sapungan, G., and Sapungan, R., 2014. *Parental Involvement in Child's Education: Importance, Barriers and Benefits Article* · [online] Available from: file:///C:/Users/User/Downloads/AJMSE20143.2-05.pdf [Accessed Wednesday 26th February 2020].

Voorhis, F.L., Maier, M.F., Epstein, J.L. and Lloyd, C.M., 2013. *The impact of family involvement on the education of children ages 3 to 8:* A focus on literacy and Math achievement outcomes and social-emotional skills. *MDRC*. [online] Available from: https://files.eric.ed.gov/fulltext/ED545474.pdf [Accessed Friday 13th March 2020].

Wilder, S., 2014. Effects of parental involvement on academic achievement: A meta-synthesis. *Educational Review*, *66*(3), *pp.377-397*. [online] Available from: http://parented.wdfiles.com/local--files/family-engagement/Parent per cent20Inv per cent20and per cent20achieve.pdf [Accessed Thursday 23rd April 2020].

Study 8.
The Impact of Parental Engagement on Pupils' Academic Attainment: A Case Study of a Primary School in the Seychelles.

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Keywords: *intervention, parental engagement, pupils' academic attainment*

Introduction, Background and Aims

Parental engagement (PE), understood as parents' collaboration with teachers to support pupils' learning, is an important element in a child's education (Houtenville and Smith Conway, 2008: 437-453). According to Smith (2011), PE in schools worldwide started in the 1800s, as a joint effort between parents and schools to enhance school attainment. The significance of PE is reflected in the effort different countries take to promote it, putting in place mechanisms that encourage parents to be more engaged in education. Thus, for instance, the Australian Parents Council, which pursues 'policies, practice, programmes, partnerships and collaboration that maximise school outcomes for all Australian children' (Australian Parents Council, 2017), provides an effective framework to encourage more parents to be engaged in school and to work in partnership with the community to advance learning. In the USA, the No Child Left Behind Act 2001, emphasized, among other things, the importance of parents' involvement as an effort to enshrine rights and access to fundamental provisions for all children.

However, despite the acknowledged positive impact of PE on children's education, only a limited number of parents engage actively in their children's schooling. Thus, the Organization for Economic Cooperation and Development (OECD) states that on an average across OECD countries, only half of the parents are engaged (Organization for Economic Cooperation and Development, 2020). In the local context, the Seychelles Ministry of Education have devised strategies to promote PE, and several initiatives have been implemented, such as the launch of Parent Teacher Associations (PTA) in 1994, and the 'Education, a Shared Responsibility' campaign in 2018, emphasizing parental and community engagement in education. Still, despite the efforts paid so far on national and school levels, PE in the Seychelles remains a concern (Agathine, 2012).

PE is seen as either a number of home-based attitudes and practices, such as creating a conducive learning environment at home, helping out with homework, revising and monitoring children's performance and discussing their academic expectations (Emerson et al, 2012), or as

a combination of the above home-based and school-related activities (communication, attending meetings, participation in school trips and voluntary activities among others) (Desforges and Abouchaar 2003; Harris and Goodall, 2007; Green and Walker, 2007; Thompson et al, 2014). PE is also understood as passing on certain attitudes and moral values to the children (Sapungan, 2014).

Literature highlights the effectiveness of PE for a number of education aspects, such as social skills, behaviour and attitudes (Desforges and Abouchaar, 2003; Alyahya, 2018; Ballantyne, 2018; Mapp, 2002; Ntekane, 2018). PE is also viewed as a factor that increases pupils' life opportunities (Ballantyne, 2018) and facilitates learners to be more successful when applying for higher education (Emerson et al, 2012). Special focus has been on the relationship between PE and pupils' attainment. Alongside extensive evidence of positive correlation between PE and students' academic attainment (Desforges and Abouchaar 2003; Emerson et al, 2012; Epstein and Janson, 2014; McNeal Jr, 2011; Smith, 2001; Stevens, 2007), some studies reveal no significant relationship between the two (Emerson et al, 2012), or even negative effects of parental engagement for students, such as low performance (Desforges and Abouchaar, 2003) or low self-esteem (Emerson et al, 2012). Thus, the relationship between PE and academic performance is still open for a discussion, and evidence from various country-specific contexts is of importance.

Very little research has been conducted on PE in the Seychelles, and only some of its aspects have been explored. Thus, Agathine's (2012) findings reveal the difference in the extent of PE at different educational stages, demonstrating that parents in the Seychelles are more engaged in early childhood education, and that as children move to upper levels, the level of PE decreases. There has been no research or correlational evidence regarding the impact of PE in the Seychelles on specific aspects of students' education, such as attainment. To fill this knowledge gap, the purpose of this research is to assess whether there is a connection between pupils' academic attainment and their parents' engagement learning.

Method

This research focused on PE as an intervention to enhance pupils' academic attainment. The effect of PE on pupils' academic attainment was measured using the types and levels of PE as independent variable, and the academic attainment of the pupils as dependent variable, Academic attainment was represented by P4 pupils' test scores in two subjects, English (literacy) and Mathematics.

Quasi-experiment testing and survey using questionnaires and interviews were used to elicit data in this study. Pupils in both control and experimental groups sat a pre-test examination in literacy and numeracy to establish their level of attainment, after which students in the control group (decided on randomly) proceeded to normal learning, whereas students in the experimental group were exposed to an administered intervention including extra parental support. After 10 weeks' implementation phase, the post-tests were administered to both groups.

All P4 pupils (aged 9 to 10 years) in a state primary school constituted the sample of this study. The P4 classes were selected for the research purposes as they are not streamed and have a representative balance of pupils' learning abilities. The two P4 teachers (one teaching literacy and the other one teaching numeracy) were purposively selected, as they had also taught the pupils in Primary 3. These teachers knew the level of engagement of parents very well and were able to give opinions on parental involvement of their respective classes. They were also able to advise on their pupils' academic progress.

The survey consisted of questionnaires, administered to the P4 parents towards the end of the 10-week intervention phase, and semi-structured interviews with the P4 teachers.

Ethical considerations such as anonymity of the participants, confidentiality of data and compliance with procedural requirements were central to this research.

Findings

The study showed that parents are differently engaged in their children's learning in terms of school or home-based support. The engagement in school related activities was reported by less than 50 per cent of parents, with the highest involvement (46.4 per cent) through attending instructional subject-specific sessions. There was considerably lower involvement (28-22 per cent) in class committee representation, meetings or open days, sports, environmental and cultural initiatives. The lowest engagement (10.7 per cent) was found in in class trips. In contrast, parents' involvement at home scored above medium: 85-88 per cent of parents mentioned supporting their children with homework and research, 66.7 per cent of parents give their children extra work at home, almost 52 per cent of parents read with their child at home.

The findings also show that apart from activities directly related to learning at home, there is also a high degree of parental engagement in other supporting activities. Thus, 88.5 per cent of parents engage in house chores shared with children, such as gardening or baking, 69.2 per cent are working on creative activities with their children and 66.7 per cent watch television together. It is also interesting to find out that a large majority of parents are taking as their responsibility the development of good attitudes in their children. Thus, over 96 per cent of parents stated that they discuss school rules with their children and 92.6 per cent discuss welfare issues with them.

According to the teachers, parents in the experiment class demonstrated higher involvement (73 per cent) as compared to the control class (43 per cent). Teachers categorized involvement in the experimental class as moderate, while in the control class as poor.

The study revealed several findings suggesting a relationship between levels of PE and pupils' academic attainment. In particular, parents receiving additional information and guidance related to Mathematics and English topics taught to their P4 children, brought about improvement in their children's academic attainment. The above was supported by a number of research outcomes. Firstly, although both **t**he control class and the experimental class demonstrated higher scores in the reading and numeracy post-tests compared to pre-test results, it was only for the experimental class that this difference proved to be statistically significant. Secondly, the analysis of performance improvement on a competency scale of proficiency levels achieved in pre- and post-tests in reading and numeracy showed that there was and increase in the number of pupils working at the higher levels for both classes Furthermore, such improvements were higher (20 per cent in reading and 50 per cent in numeracy) in the experiment class than in control class (13 per cent in reading and 25 per cent in numeracy). Finally, the data revealed statistically significant positive shift in the number of

pupils who moved from 'below target' to 'on target' in the numeracy post-test compared to the numeracy pre-test in the experimental class. No such shift was seen in the control group.

Conclusions and Recommendations

This study shows that, in addition to background variables that affected both groups positively, the intervention had a positive effect on parental behavior, contributing to a higher level of PE, which, in turn, positively influenced pupils' academic attainment. Alongside the fact that PE in learning seemed to be more home- rather than school-oriented, the guidance parents got regarding learning matters in English and Mathematics, as well as the offered intervention strategies, enabled them to better support their children academically which translated in pupils' higher attainment scores and improved competency levels.

Overall, the research demonstrates that a more centralized and policy-oriented approach to PE can yield positive results, especially when combined with bottom-up consultations with parents. The country-specific research findings about relationship between PE and pupils' attainment in the Seychelles contributes to a better understanding of the concept of PE in general, and its potentiality for pupils' education. These findings can be useful for school leaders, policy makers and other stakeholders in education locally and internationally, as well as being used as a starting point for further research into this field.

References

Agathine, F. 2012. *To what extent can parental involvement influence children's learning in the Seychelles Primary schools*. Mahé, Seychelles.

Alyaha, A., 2018. *Parental Engagement in the Education of gifted children in Saudi Arabia: A phenomenological study.* [Online]. University of Northern Colorado. Available from: https://digscholarship.unco.edu/cgi/viewcontent.cgi?article=1533&context=dissertations. [Accessed on 9 July 2021].

Australian Parents Council, 2017. *Supporting Children's Learning*. [Online]. Lanceston, Tasmania. Available from: https://austparents.edu.au/information-and-advice/supporting-childrens-learning/ . [Accessed on 4 February 2021].

Ballantyne, R. 2018. *The value of parental engagement in learning*. [Online]. Available from: https://www.theeducatoronline.com/k12/news/the-value-of-parental-engagement-in-learning/249464. [Accessed on 19 March 2020].

Desforges, C. and Abouchaar, A. 2003. *The Impact of Parental Involvement, Parental Support and Family Education on Pupil Achievements and Adjustments: A Literature Review.* [Online]. Queen's Printer. Available from: https://www.nationalnumeracy.org.uk/sites/default/files/documents/impact_of_parental_involve ment/the_impact_of_parental_involvement.pdf. [Accessed on 4 September 2020].

Emerson, L., Fear. J. Fox, S., and Sanders, E. 2012. *Family school and community partnership bureau*. [Online]. Australian Research Alliance and Youth, (ARACY), Canberra. Available from: https://www.aracy.org.au/publications-resources/command/download_file/id/7/filename/Parental_engagement_in_learning_and_schooli ng_Lessons_from_research_BUREAU_ARACY_August_2012.pdf . [Accessed on 18 March 2020].

Epstein, J. L. and Salinas, K., C. 2014. Educational leadership, partnering with families and communities. *Schools as learning communities*, 61(8), pp.12-19. [Online]. ASCD. Available from: http://www.ascd.org/ASCD/pdf/journals/ed_lead/el200405_epstein.pdf. [Accessed on 25 January 2021].

Green, C. L., Walker, J. M. T., Hoover-Dempsey, K. V., & Sandler, H. M. 2007. Parents' motivations for involvement in children's education: An empirical test of a theoretical model of parent involvement. *Journal of Educational Psychology*, 90 (3), pp532–544. [Online]. Vanderbit University. Available from: https://www.academia.edu/12999842/Parents_motivations_for_involvement_in_childrens_education_An_empirical_test_of_a_theoretical_model_of_parental_involvement. [Accessed 14 March 2021].

Harris., A, and Goodall, J. 2017. *Parents in Raising Achievement, do Parents know what they matter*. [Online]. University of Warrick. Available from: https://dera.ioe.ac.uk/6639/1/DCSF-RW004.pdf.[Accessed on November 2020].

Houtenville, A. J. and Smith Conway, K. 2008. Parental Effort, School Resources, and Student Achievement. *The Journal of Human Resources* XLIII (2), pp. 437-453.

Mapp, K. L., 2002. *Having their say: parents describe how and why they are involved in their children's education.* [Online]. Available from: http://files.eric.ed.gov/fulltext/ED464724.pdf. [Accessed on 18 March 2021].

No Child Left Behind Act, 2001. *National Act of 2001*. [Online]. Washington Office of Superintendent of Public instruction. Available from: https://www.k12.wa.us/policy- funding/grants-grant-management/every-student-succeeds-

act-essa-implementation/elementary-and-secondary-education-act-esea/no-child-left-behind-act-2001. [Accessed on 11 March 2021].

McNeal Jr., R.1999. *Parental Involvement as Social Capital: Differentiated Effectiveness on social achievement, truancy and dropping out*. [Online]. University of North Carolina Press. Available from: https://www.jstor.org/stable/3005792. [Accessed 21 October 2020].

Ntekane, A., 2018. *Parental involvement in education.* [Online]. North West University. South Africa. Available from: https://www.researchgate.net/publication/324497851_PARENTAL_INVOLVEMENT_IN_EDU CATION. [Accessed on 18 March 2020].

Organization for Economic Cooperation and Development, 2020. *Learning from Crisis, Building Resilience*. [Online]. Available from: https://www.oecd.org/dac/development-co- operation-report-20747721.htm. [Accessed 14 January 2021].

Sapungan, G. and Sapungan, R., 2014. Parental Involvement in Child's Education: Importance, Barriers and Benefits. *Asian Journal of Management Sciences &Education*, 3(2) pp. 42-48. [Online]. International University, Bahrain Available from: https://www.researchgate.net/publication/283539737_Parental_Involvement_in_Child's_Educati on_Importance_Barriers_and_Benefit. [Accessed on 24 May 2020].

Smith, K. Y., 2011.*The impact of parental involvement on student academic achievement.* [Online]. University of South California. Available from: kfile:///C:/Users/Agnielle/Desktop/Dissertation per cent20notes/dissertation.pdf per cent20smith per cent202011.pdf. [Accessed on August 2020].

Stevens, V. K., 2007. *Parental involvement in two elementary schools: A qualitative case study.* [Online]. Available from: https://dc.etsu.edu/cgi/viewcontent.cgi?article=3428&context=etd. [Accessed on 18 March].

Thompson, K., Gillis, T., Fairman, J. and Mason, A.. 2014. *Effective strategies for engaging parents in students' learning to support achievement.* [Online]. University of Maines. Available from: https://usm.maine.edu/sites/default/files/cepare/Effective_Strategies_for_Engaging_Parents_in_students_Learning_to_Support_Achievement.pdf. [Accessed on 21 March].

Study 9.
The Implementation and Evaluation of a Parental Involvement Intervention in Students' Learning in the Seychelles during the COVID-19 Pandemic.

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Keywords: *Parental involvement, academic achievement, intervention, implementation, evaluation, COVID-19.*

Introduction, Background and Aims

The engagement and involvement of parents and guardians and/or other family members in a child's learning have been pointed out as decisive factors for school success. Consequently, such involvement in children's learning has been a reoccurring topic of investigation in educational research internationally (see Martinez, 2015, for example).

The importance of parental involvement has long been recognized in curricular frameworks in the Seychelles. The Seychelles Early Learning Framework (2015), for example, points out that parents'/guardians' knowledge of development, their expectations for their children and their parenting styles will influence children's attitudes to life and to learning later on. It also emphasizes that family participation is essential for the success of each child (Ministry of Education, 2015). Similarly, the National Curriculum Framework highlights that one of its main objectives is to provide guidance on parental involvement in the education of their children (Ministry of Education, 2013).

Support from home became a particularly pressing matter during the COVID-19 pandemic, when schools were shut down and many learners in the Seychelles and elsewhere were forced into home schooling. Solberg (2020) maintains that the COVID-19 pandemic has resulted in the largest disruption of education in modern history, exacerbating existing inequalities in education. In the same study, Solberg (2020) maintains that according to UNESCO, around 1.6 billion learners have been affected. Furthermore, Mcelrath (2020) notes that the COVID-19 pandemic dramatically changed the way children were being educated. Seychelles was no exception.

Given the impact of the COVID-19 situation in the Seychelles late 2020 and early 2021, the government had to put measures into place with regards to the safety and wellbeing of

students and staff in all schools. At the beginning of the new school year in 2021, it was thus confirmed by the Ministry of Education and the Ministry of Health (2020:6) that with increasing numbers of new COVID-19 cases being reported daily, it was unavoidable that classes would be delayed. It was in this context that all schools were closed in mid-March 2021, and this lasted for a period of about two months. Leaders had to take certain decisions and react fast in order to maintain teaching and learning under these new circumstances, especially given that younger learners could not really be expected to work independently. This motivated the introduction of the *Home Learning Monitoring Strategy* (HLMS), the effects of which is the subject of this study.

The HLMS intervention was implemented early 2021. It targeted parents/guardians and students, and the focus was on learning tasks provided by teachers through the virtual mode during the closure of schools. HLMS also provided a structured framework for monitoring that these tasks were carried out with parental support and supervision. More specifically, during the times of school closure, teachers sent work through WhatsApp groups created by the class teacher. The homework learning tasks included research work, assignments, projects, reading activities, worksheets and supplementary work for English and Social Studies. Generally, these were follow-up activities mirroring regular teaching at school.

The Home Learning Monitoring Strategy (HLMS) was intended to get parents/guardians to assist their child while doing the work virtually during school confinement. Under the HLMS program, parents/guardians were given a homework timetable at the beginning of the term in order to facilitate planning and monitoring. Parents were also informed about their responsibilities in meetings prior to the program. Also note that the program was intended to be continued after students returned to school.

The main query in this study concerns the implementation of the Home Learning Monitoring Strategy (HLMS) during closure of schools. Two questions, in particular, are of interest: Firstly, we wanted to find out how the implementation of the HLMS was perceived by parents/guardians and how well learners managed the HLMS. Secondly, we attempt to evaluate the effects of the HLMS on learners' academic achievement. In particular, we look the end of term summative assessments in the subjects English and Social Studies.

Method

Firstly, it is noteworthy that the researcher in her capacity of headteacher was closely involved in the implementation and monitoring of this program. The class teacher, subject leader for languages and deputy headteacher for studies were also important contributors. The study targeted a primary four class which consisted of 26 students and their parents/guardians. Note that only 19 parents/guardians contributed to the questionnaire data (see below). The duration of the intervention was one term, approximately three months, which included six weeks that students attended classes on a normal basis. The rest time students worked from home during the lock-down period.

Of particular importance for this study, were the logbooks that learners were asked to keep under the HLMS intervention. These included a record of their homework and any assistance provided by their parents/guardians. Information also included assignment descriptions, dates when assignments were given, subject focus (note that English and Social Studies were of particular interest in this study), comments from parents/guardians on the amount and type of support they had given, as well as signatures from parents/guardians and teachers (as well as the researcher) confirming that the work had been done (or not).

Three data sets contributed to the results. Firstly, access to the logbooks (described above) gave the researcher a detailed records of the HLMS activities, which could then be assessed. Information evaluated included aspects such as whether the task written/copied correctly or not; whether the homework was handed in on time; and the quality of the work, i.e. whether it was done correctly and neatly presented. Notes were also taken to see if the written confirmations from parents/guardians were provided.

The second data set consisted of questionnaire responses from parents/guardians, where they were asked about aspects such as the type and frequency of involvement, and about aspects that hindered involvement. Overall, these data were collected in order to give a holistic idea of how the HLMS worked during the COVID-19 period, but also to evaluate what aspects had more general relevance for parental/guardian involvement.

The third data set consisted of the results of summative assessments designed by the class teacher for English and Social Studies to assess students' learning at the end of the intervention phase. The assessments measured proficiency, mastery and understanding of general and specific areas of knowledge and were graded from A*-D and below, where A* represented scores >90 per cent, A scores >80 per cent, B scores >70 per cent etc.

Findings

Firstly, the evaluation of the log-book information was very encouraging. Learners copied their assignments correctly in both the subjects investigated, i.e., Social Studies and English (26 and 25 respectively) and a vast majority handed in their assignments on time (24 and 22 respectively). The work was generally neat and presentable (20 and 25 respectively) and a majority of the learners (17 and 23 respectively) provided written confirmations from parents/guardians. In summary, the HLMS worked well for almost all the learners, who managed to follow instructions and hand in work of good quality on time.

The questionnaire responses from parents/guardians showed that all respondents provided ample support to their children at home (always or most of the time). This applied particularly when it came to helping with homework and taking an active interest in looking at work produced in exercise books etc. Keeping active contact with the school, i.e., discussing their children's learning with teachers and attending meetings and celebrations etc. was slightly more sporadic, but about 80 per cent of the respondents indicated that they visited the school and also discussed their children with teachers 'always' or 'most of the time'. Other school activities such as celebrations were less well attended (about 50-60 per cent).

The questions relating to how parents/guardians supported their children were extremely encouraging. All respondents assisted their child with work provided online by the school, all parents assisted their child while doing project and research work, and all parents also supported their child in reading. Despite this, a large majority of 18 participants said that they would like to be even more engaged in their child's learning. Furthermore, 13 participants said they were aware of the content of the curriculum. Sixteen participants welcomed the idea to use the intervention programme to better assist their child. The information from the logbooks corroborated these results, i.e., that parents/guardians were very active in supporting their children. When asked about what factors hindered full involvement, time constraints was the most common answer (27 per cent). Technical issues such as connectivity (19 per cent) and lack of printing facilities (12 per cent) were also common answers.

The summative assessments of the intervention term were very encouraging. In both subjects evaluated, a majority of the learners received an A* or A. The results for the Primary 4 cohort investigated are summarized below in Table 1 below.

Table 1: Results for end-of-term assessments 2021 for the subjects Social Studies and English

Range	Number of students in Social Studies	Number of students in English
A* 90 per cent-100 per cent	17 (65.38 per cent)	4 (15.38 per cent)
A 80 per cent-89 per cent	7 (26.92 per cent)	12 (46.15 per cent)
B 70 per cent-79 per cent	2 (7.69 per cent)	6 (23.08 per cent)
C 60 per cent-69 per cent	0 (0 per cent)	3 (11.54 per cent)
D 50 per cent-59 per cent	0 (0 per cent)	1 (3.85 per cent)
Below 50 per cent	0 (0 per cent)	0 (0 per cent)
Total	**26 (100 per cent)**	**26 (100 per cent)**

Conclusions and Recommendations

In general, the results of the intervention were very encouraging. Learners managed to follow instructions and took responsibility for their work, and most parents were very engaged in the learning of their children. A majority also claimed that they were ready to embark on this new approach even after COVID-19. One success factor here was arguably that the intervention framework provided very clear structures and regular routines for both parents and learners. Though most parents felt that it was important to assist their child, and even wanted to do so more, there were also some factors which hindered their involvement in their child's academic work. The main factors highlighted by parents were time constraints and technical limitations.

Overall, it can be concluded that the implementation of the Home Learning Monitoring Strategy (HLMS) during the COVID-19 closure of schools actually enhanced students' academic performance. It is therefore recommendable that similar programs, based on monitored frameworks (with logbooks etc.), should be implemented on a more permanent basis.

References

Martinez, A. 2015. *Parent involvement and its effects on student academic achievement*. Master of Arts in Education Thesis: California State University, Stanislaus. Accessed: 26.02.21

Mcelrath. K., 2020. Schooling during the COVID-19 pandemic. Online. Available: Schooling During the COVID-19 Pandemic (census.gov) Accessed: 30.05.21

Ministry of Education and Ministry of Health. 2020. Guidance on the prevention and control of COVID-19 in schools. Accessed: 02.06.21

Ministry of Education. The National Curriculum Framework. Supporting a new vision for Learning. Seychelles Nation. 2013. Online. Available: http://www.nation.sc/archive/239424/the-national-curriculum-framework-supporting-a-new-vision-for-learning. Accessed 20.10.20

Ministry of Education. The Seychelles Early Learning Framework. 2015. Online. Available: http://www.education.gov.sc/aboutus/Documents/policies/Seychelles per cent20Early per cent20Learning per cent20Framework per cent202015.pdf. Accessed:20.11.20

Solberg. E., 2020. Learning to learn during pandemic. Online. Available: Learning to learn during a pandemic | Coronavirus pandemic | Al Jazeera Accessed: 30.05.21

Theme 4.
Building and Supporting Teacher Competencies

Study 10.
Issues and Concerns of Novice Teachers in the Primary Schools: A Study of Three Primary State Schools on Mahe, Seychelles.

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Keywords: *Novice teachers, issues, concerns, factors, conditions, challenges, retention, support*

Introduction, Background and Aims

Teacher shortage is an international challenge to education systems (Steiner-Khamsi 2016), affecting both developed countries such as USA (Berry and Shields 2017) and developing countries such as South Africa (Pitsoe 2013). The situation around teacher shortage has been described by the education authorities as a threat to education (Berry and Shields 2017). Teacher shortage is also a major concern in the Seychelles, and one of its factors is high teachers' turnover: many Seychellois teachers, especially the highly educated ones, do not stay long in the job for several reasons, including dissatisfaction with the working conditions and limited career prospects (Campling, Confiance, and Purvis, 2011). To close the gap, the Ministry of Education relies on the recruitment of foreign teachers from other countries, including Kenya and Zambia. However, the engagement of foreign teachers is also far from being steady, as they either return to their countries on completion of their contract or quit shortly after they report to school.

Leaving the profession points to teachers' dissatisfaction and lack of commitment. Notably, though teacher commitment fluctuates during their career (Day & Gu, 2007), some teachers quit before their fifth year in the job (Lough, 2020; Weale, 2019). Such early exit from the profession is not only frustrating for beginner teachers themselves, it also causes negative effects on the education system as such, exacerbating teacher shortage and wasting talent and expertise (Fantilli and McDougall 2009). Thus, exploring the reasons for novice teachers' insecurity, something which can potentially lead to their leaving the profession, is an important step in addressing the issue of teacher shortage in general.

Linked to the above, several studies have been carried out to explore the reasons of novice teachers' leaving their jobs (De Comarmond 2013; Edwards and Nuttall 2015; Fantilli and

Douglas 2009; Meister and Melnick 2003; Stillo and Furxhi 2016). The major identified factors that cause novice teachers to quit the profession include time constrains and excessive workload, poor salaries, low professional status, student misbehavior, conflicts with parents, insufficient resource, lack of support. The research evidence suggests that unless appropriate interventions are initiated to address the above factors and conditions, teacher attrition will remain a concern to the education systems.

The problem of teacher shortage in the Seychelles has been addressed in several initiatives. Thus, in an effort to enhance the retention of teachers, during the past decade, the government of Seychelles has introduced several initiatives, including a new scheme of service (Government of Seychelles, 2010), a new code of conduct on indiscipline in schools (Department of Education, 2010), a new teacher appraisal system (Department of Education, 2017), among others.

However, despite the improved packages and conditions, many teachers in the Seychelles quit shortly after being employed (De Comarmond, 2013). Such continuous withdrawal of novice teachers points to insufficient understanding of reasons for their leaving the profession, and there is a need for more research to identify and address factors and conditions influencing the flow of teachers at the beginning of their career. In this respect, the present case study dealing with issues and concerns of novice teachers in the Seychelles gains its relevance and currency. The study focuses on how novice teachers perceive their teaching job and the quality of teacher education training they received; the challenges they face while performing their duties; and the kind and frequency of support they receive.

Method

The three state schools chosen for this study, identified as School A, School B and School C, represent the three school categories - small-sized, medium-sized and large-sized, in the Seychelles. A total of 17 novice teachers (less than 7 years in service) in the above schools (6 from School A, 6 from school B and 5 from School C) were identified with the help of the headteachers.

The data for the study was gathered from a novice teachers' survey, through a structured questionnaire with multiple choice rubrics and possibility for unstructured input. It contained four topical areas addressing the four tested variables: (1) novice teachers' perception of teaching as a profession; (2) novice teachers' opinion of the education/training they received; (3) main challenges encountered by novice teachers; (4) kind and level of support novice teachers received. Verbal data was analysed qualitatively and its numerical values were

processed in Excel. Ethical standards (the permission to carry out this research, participants' informed consent, anonymity and confidentiality) were observed.

Findings

Novice teachers' perceptions about the teaching job

Evidence from the questionnaire proved that most teachers in the sample perceive teaching as a noble profession (100 per cent) and the job of their dream (94.1 per cent). However, most of them consider teaching as a profession for women (88.2 per cent), one of the poorly paid jobs (82.4 per cent) and with low chance to switch to another career (94.1 per cent). Thus, though new teachers have very positive expectations about teaching and are passionate about this profession, one of the potential reasons of their quitting may be insufficient social value of teachers underpinned by low wages, stereotypical gendered association with women and limited potential for career expansion.

Novice teachers' perceptions of the quality of education/training they received

Most of respondents (88.2 per cent) consider teaching a highly qualified occupation and believe that they have received enough training (94.1 per cent). Furthermore, most novice teachers are confident about their subject specific (88.2 per cent), methodological (94.1 per cent) and pedagogical (88.2 per cent) skills. Thus, in general novice teachers in the sample are of the opinion that they are properly trained and skillful enough to undertake teaching.

Novice teachers' opinion on their job-related challenges

Analysis of new teachers' evaluation of various activities they undertake at work in terms of presented difficulties has shown that overall, most working aspects (65 per cent) are perceived by novice teachers in the sample as light difficulties rather than medium (35 per cent) or severe (6 per cent) ones (see figure 1). This data point to the fact that new teachers in sampled schools are quite enthusiastic about their job and look positively at their job-related challenges.

Analysis of the level of difficulties of specific activities shows that the two activities which are perceived as severe difficulties are managing classrooms (41.2 per cent) and accessing computers (47.1 per cent). Students' behavior problems came up as the common reason of class disruption. This problem was coupled by lack of support from parents, mentioned by 29.4 per cent of respondents as a problem of medium level. Other most challenging activities (where responses mentioning medium degree of difficulty outnumber those with low degree of difficulty) for new teachers in the sample are accessing vital

documents such as National Curriculum and programme of study, writing detailed lesson plans, preparing/obtaining instructional materials and delivering learner-centred lessons. Such activities as designing the weekly/termly plan of work, designing assessment tools, keeping students' records, relating with learners and parents, working in teams with other staff members, taking instructions from mentors, applying ICT skills were mentioned more often as light challenges than as medium challenges.

The above data show that new teachers experience greater difficulties in some methodological areas (preparing detailed lesson plans and instructional materials or delivering learner-centered lessons) than others (designing the weekly/termly plan of work, designing assessment tools). Such ranking suggests that some aspects of preparing the former methodological materials (e.g., enhanced intensity of daily planning, or the necessity to consider numerous aspects in learner-centered delivery) may potentially be a factor contributing to new teachers' professional insecurity. Insufficient technical resources were also listed as major factors, for example limited access to computers (47.1 per cent mentioning it as severe difficulty), and associated difficulties in getting access to instructional resources (mentioned by 58.8 per cent of respondents as challenge of medium level). This, in its turn, was linked to difficulties with delivering learner-centered lessons (mentioned by 52.9 per cent of new teachers as a medium level challenge).

To sum up, resource related difficulties (getting access to computers) and methodological aspects (daily planning and instructional materials) cause more difficulty to new teachers than administrative areas (keeping students' records) or communication aspects (relating with students, parents, other staff members or mentors), or technology-related issues (applying ICT skills).

Support that novice teachers get

Analysis of frequency of support that respondents get shows that in general, novice teachers in sampled schools regularly get various types of support: the options 'most of the time' and 'sometimes' scored substantially higher than 'rarely' or 'never' for all items in this questionnaire category.

The most frequent types of support rendered to new teachers in the sample (mentioned by most respondents as happening most of the time) are: team planning (70.6 per cent), in-house professional development sessions (70.6 per cent), support from colleagues (58.8 per cent), verbal/written recognition from school management (58.8 per cent), and support from parents (47.1 per cent). The least typical support (mentioned by the biggest number of

respondents (29.4 per cent) as never happening) is promotion and other incentives from the employer. Team teaching and externally organised workshops/conferences are the next least frequent type of support, mentioned as sometimes happening in 29.4 per cent and 35.3 per cent respectively, and mentioned as never happening in 17.6 per cent and 5.9 per cent. Notably, the comparison of the nature of 'most of the time' and 'sometimes' vs 'rarely' and 'never' supported rubrics suggests that schools render more instructional support to novice teachers than material support.

Conclusions and Recommendations

Overall, the analysis of novice teachers' input in this study has revealed the following factors of their insecurity and dissatisfaction which can potentially lead to their decision to quit. First out is the low social value attached to the teaching profession, sustained by low wages, stereotypical gendered association with women and limited potential for career expansion. Second mentioned, are the limited resources available in schools, which results in either insufficient material teaching means (e.g., computers and internet), triggering methodological problems (e.g., getting access to instructional resources and designing teaching materials), or in limited support opportunities to novice teachers (scarcity of promotion and incentives or externally organised workshops and conferences). Third, some elements of lesson preparation (detailed lesson plans) and delivery (diversity of learners' level as part of the learner-centered approach or students' discipline problems coupled by lack of parental cooperation) can cause teachers' premature attrition and quitting.

The results of this study, limited by its sample and correlational character, may be moderated by further studies of new teachers' perspectives on their profession-related challenges in other schools in the Seychelles, as well as including other perspectives on this factor, e.g., from school managers. However, by capturing the representative trend from the three types of schools in the Seychelles (small, medium and big), the study, based on its evidence, suggests that to prevent teachers flow and shortage, more attention should be paid to the social value of teachers, material support of schools and methodological and pedagogical support of novice teachers.

References

Berry, B. & Shields, P. M. 2017. Solving the teacher shortage. *Phi Delta Kappan,* 98 (8), 8–18.

Campling, L., Confiance, H., and Purvis, M. 2011. *Social policies in Seychelles.* Hampshire: Commonwealth Secretariat and United Nations Research Institute for Social Development. [Online] Available at *http://dx.doi.org/10.14217/9781849290654-en*. [Accessed 16 June 2021].

Day, C. & Gu, Q. 2007. Variations in the conditions for teachers' professional learning and development: Sustaining commitment and effectiveness over a career. *Oxford Review of Education*, 33(4), 423-443.

Department of Education. 2010. *Code of Conduct for Secondary Schools*. Victoria: Ministry of Education, Employment and Human Resources.

Department of Education. 2017. *New Teacher Appraisal System*. Victoria: Ministry of Education, Employment and Human Resources.

De Comarmond, O. 2013. *Exploring commitment of secondary teachers in Seychelles.* Christchurch, New Zeland: University of Canterbury.

Fantilli, R., McDougall, D. and Douglas, E. 2009. A study of novice teachers: Challenges and supports in the first years. *Teaching and Teacher Education 25(6), 0–825.*

Government of Seychelles. 2010. *Teachers' Scheme of Service*. Victoria: Ministry of Education, Employment and Human Resources.

Lough, C. 2020. Third of teachers leaving the profession within 5 years. *Tes Magazine* [Online] Available at: Recruitment: Third of teachers quit the profession within 5 years | Tes [Accessed 21/07/21].

Meister, D. G., & Melnick, S. 2003. National new teacher study: Beginning teachers concerns. *Action in Teacher Education*, 24(4), 87–94.

Pitsoe, V. J. 2013. Teacher Attrition in South Africa: Trends, Challenges and Prospects. *Journal of Social Sciences*, 36(3), 309-318 [Online] Available at: DOI: 10.1080/09718923.2013.11893197 [Accessed 21/07/21].

Steiner-Khamsi, G. 2016. Gita Global Indicators and Local Problem Recognition: An Exploration into the Statistical Eradication of Teacher Shortage in the Post-Socialist Region in K. Mundy, A. Green, B.Lingard, and A. Verger (eds) *The Handbook of Global Education Policy*: Wiley Blackwell. pp. 573-589.

Stillo, S., & Furxhi, G. 2016. The Retention of the Employees as Long as Possible in the Organization, through Finding the Right Factors of Motivation. Albania as a Case of

Study. *European Journal of Economics and Business Studies* 2, 51-58. [Online] Available at: https://doi.org/10.26417/ejes.v5i1.p51-58 [Accessed 20/08/21].

Weale, S. 2019. Fifth of teachers plan to leave profession within two years. [Online] Available at: https://www.theguardian.com/education/2019/apr/16/fifth-of-teachers-plan-to-leave-profession-within-two-years. Accessed on 21/07/2021

Study 11.
Teachers' Pedagogical Content Knowledge in Mathematics - A case study of Early Childhood teachers in Seychelles Primary Schools.

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Keywords: *Pedagogical content knowledge, Knowledge of content and curriculum knowledge of content and teaching, knowledge of content and students.*

Introduction, Background and Aims

Mathematics plays a central role in the development of children. When pupils learn mathematics, they develop their logical thinking skills, and it helps them to become problem solvers (Ministry of Education, 2014). Having mathematics competence empowers pupils in their everyday life and their future careers. In the Seychelles, pupils start to learn the pre-mathematical concepts in pre-school, which prepares them to learn core mathematics in primary levels. In early childhood education, pupils learn mostly the number and operations contents, which provides them with a strong foundation that is needed for successful learning of mathematics in higher levels (Machaba, 2013).

The teacher is a key player in this learning process and needs to have a sound understanding of mathematical knowledge in order to ensure that the subject is taught in a meaningful manner. Fennema and Franke (1992) assert that what a teacher knows is one of the most important influences on what is done in the classrooms, and eventually on what pupils learn.

Reports of key stage examinations from 2016 to 2020 indicate that Mathematics is the lowest performing subject in the Seychelles. Reports on key stages one, two and three examinations (Benstrong, 2019; Felix, 2019) show a decrease in Mathematics national means from 2015 to 2019. Pupils in the early stages of their schooling, in primary one and two, seem to struggle with basic arithmetic concepts and skills, something which is of national concern and merits further investigation. Could these shortcomings be a result of limitations in the teachers' mathematical knowledge for teaching? With such issues in mind, this study sets out to investigate teachers' Pedagogical Content Knowledge (PCK), a sub-domain of the so-called

Mathematical Knowledge for Teaching (MKT) framework (Ball et al., 2008), which has been identified as an essential factor for successful teaching practice in the early childhood classroom (Dwi Juniati and Siswono, 2019; Olfos et al., 2014).

There has been a substantial number of studies conducted on pedagogical content knowledge (PCK) in Mathematics teaching (see for example Shulman, 1986; Ball et al., 2008; Baker and Chick, 2013; Gokkurt-Ozdemir and Soylu, 2017; Kadarisma et al., 2019). According to Shulman (1986) PCK is defined as the teacher's ability to transform content into methods that are pedagogically powerful, and that can adapt to the various abilities and backgrounds that students bring to school. PCK in the context of this study is defined as the combination of content knowledge, pedagogy and knowledge of students learning. In short, Kumari (2015) describe PCK as the ability of teachers to use their content knowledge and pedagogical knowledge in order to explore mathematics topics and present the content in a graspable manner for the learners. The aforementioned definitions assume that PCK comprises the teacher's knowledge of the curriculum, pedagogy as well as the students' learning prerequisites. The different aspects included under PCK are summarized in Figure 1 below.

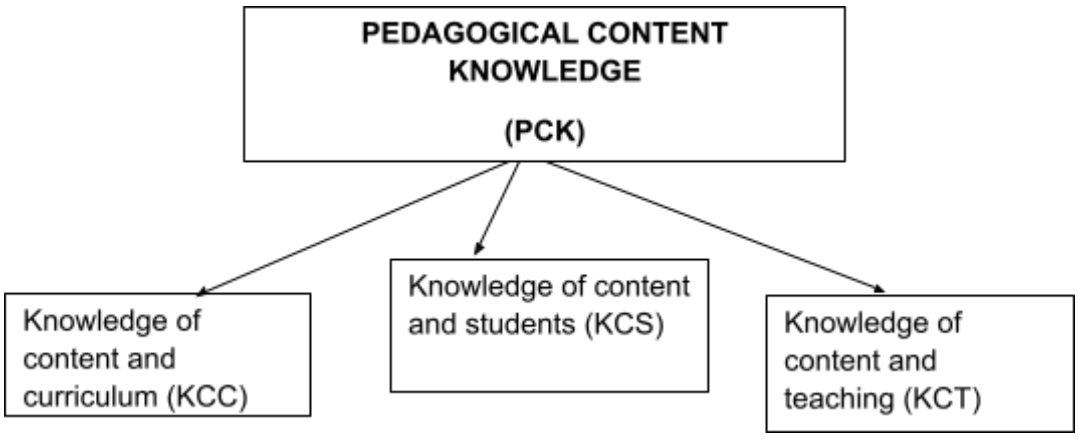

Figure 1. Different aspects of PCK.

More specifically, this study aims to provide information about teachers' PCK levels and to identify gaps in their classroom practice. To our knowledge, there has been no such research done to date in the Seychelles, although many other aspects of Mathematics have been studied (see for example Maria, 2005; Alcindor, 2005; Valentin, 2011; 2012). The specific objectives of this study are to establish the level of PCK of teachers for the knowledge domain *number and operations*, and to ascertain if there is any relationship between teachers' experience of their teaching and their PCK level in this knowledge area. Finally, we try to evaluate the impact of teachers' PCK on students' achievements in Mathematics.

Method

This study adopts a pragmatic mixed methods approach. The data collection tools were devised to focus on the *number and operations* domain, a strand in the early childhood mathematics curriculum. The collection of quantitative and qualitative data was conducted using five different data collection methods: questionnaires, PCK tests, interviews, classroom observations and student results. The points of focus included aspects related to the three sub-domains of PCK (Knowledge of content and curriculum (KCC), Knowledge of content and students (KCS) and Knowledge of content and teaching (KCT) - see Table 1 below).

Table 1. Elements of KCC, KCS and KCT investigated (based on Baker and Chicks 2013; Ball et al., 2008).

Pedagogical Knowledge Content Domain	**Skills and Knowledge**
Knowledge of Content and curriculum (**KCC**)	• Can select exercises/tasks that are appropriate to the level being taught is teaching. • Can discuss the importance of learning the content. • Demonstrates knowledge of the mathematics content and skills for respective level. • Selects the appropriate teaching materials for the topic. • Selects activities that match the topic and pupils' ability.
Knowledge of content and students (KCS)	• Asks different types of questions that direct pupils' thinking. • Evaluates pupils' learning effectively. • Identifies difficulties that pupils have in learning the topic number and operations • Interprets pupils' emerging and incomplete ideas. • Shows knowledge of what is easy or difficult for the pupils. • Identifies pupils' misconceptions present when learning number and operations. • Addresses pupils' identified misconceptions. • Figures out what was wrong when analysing the error made by a pupil. • Tests pupils' understanding on the topic.
Knowledge of Content and Teaching (KCT)	• Illustrates examples, which are relevant to the topic. • Demonstrates conceptual development of the topic. • Uses the appropriate mathematical language to facilitate learning. • Determines that learning activities match the topic and pupils' ability. • Understands what makes learning of a topic difficult. • Comprehends that the strategies used were appropriate/ well sequenced. • Makes use of teaching aids/ materials to facilitate the learning process

The questionnaire tool consisted of a series of questions and other prompts for gathering information from respondents: Part A focused on the teacher's background and part B focused on aspects related to the three subdomains of PCK. The questionnaire was administered to Mathematics teachers (n=8) from two schools.

A Mathematics PCK test was adapted with reference to the PCK framework comprising of the three subdomains of PCK. The test was specifically designed to measure the level of PCK in the domain *number and operations* and was administered to the teachers under controlled and set conditions.

The semi-structured interviews were carried out on a one-to-one basis and were recorded using an audio device. Questions addressed the three subdomains of PCK. Classroom observations were also carried out using an observation checklist with a rating scale 1 to 4, also focusing on the three subdomains (KCS, KCT and KCC) of PCK. The interviews in combination with the observations helped the researcher to ascertain what participants think *and* do, i.e. how their theoretical knowledge was/was not translated into practice. Finally, the end of year Mathematics results of pupils from mark books of all the eight teachers were compiled for correlational analysis with the other findings.

Ethical considerations such as anonymity of the participants, confidentiality of data and compliance with procedural requirements were central to this research.

Findings

The findings were analysed and organised according to four themes: 1. Familiarity with the curriculum; 2. Perceived Challenges; 3. Instructional practices, and 4. Effect of teachers' knowledge on student attainment.

The interviews data revealed that the teachers perceived themselves as confident with teaching of *number and operations* and that they were aware of the different aspects that they should consider and teach with regards to the primary one and primary two curriculum.

Challenges perceived included having to teach all subjects, some of which, including Mathematics, they were not familiar with. Though some of the respondents had formal mathematics qualification, they perceived difficulties to impart this knowledge to small pupils from primary one and primary two.

In their practice, the teachers used their PCK in various representation methods to teach the content number and operations. This was corroborated in the interview data where several teachers referred to various strategies and learning aids for conceptual development. However, awareness of pupils' thinking, an important factor in KCS, was not something referred to or evidenced in the observations. This suggests that some teachers may have strong knowledge of the content itself but a weaker understanding of how students learn the content.

Finally, overall analysis of teachers' PCK and correlational analysis of these levels with student performance revealed that teachers' PCK impact on pupils' learning outcomes to a large extent.

PCK seems to be crucial in the teaching of mathematics since it is this knowledge that allows teachers to represent concepts in a way that is understandable to the pupils. The results also revealed that the teachers' teaching experience does not necessarily determine their PCK level. Instead, the findings indicate a significant relationship between the teachers' PCK and the training attended; all the teachers with a good PCK level possessed at least a Diploma.

Conclusions and Recommendations

This study contributed to knowledge through a proposed PCK framework that can help to improve the teaching and learning of Mathematics in Seychelles primary schools. The results suggest that PCK is central to Mathematics teaching. Consequently, we recommend that professional development should be conducted to upgrade teachers' knowledge on PCK through vocational additional training. Further it is recommended that the concept of PCK be integrated in the teacher education curriculum.

References

Alcindor, S.M., 2005. *Improving Mathematics in a Primary School*. Thesis (MBA) University of Lincoln.

Baker, M. and Chicks, H., 2013. Pedagogical Content Knowledge for Teaching Primary Mathematics: A Case Study of Two Teachers. *Australian Research Council*. [Online]. Available from: https://udmathteaching.files.wordpress.com/2013/08/pck-for-teaching-primary-mathematics.pdf [Accessed 11th March 2020]

Ball, D.L., Thames, M.H. and Phelps, G., 2008. Content knowledge for teaching: What makes it special? *Journal of Teacher Education*, [Online], 59(5), 389–407. Available from: https://doi.org/10.1177/0022487108324554 .[Accessed 27th May 2020]

Benstrong, E. 2019. *Primary Six National Examination Report 2018, Mathematics*. Mont Fleuri. Ministry of Education and Human Resource Development.

Dwi Juniati, M. and Siswono. T.Y. E., 2019. Examining Prospective Teachers' Belief and Pedagogical Content Knowledge Towards Teaching Practice in Mathematics Class: A Case Study. *Journal on Mathematics Education*, [Online], 10(2), pp.185-20. Available from: https://files.eric.ed.gov/fulltext/EJ1218134.pdf [Accessed 27th May 2020]

Felix, I., 2019. *End of Key Stage Examination Report 2018, Mathematics*. Mont Fleuri. Ministry of Education and Human Resource Development.

Fennema, E. and Franke, M. L., 1992. Teachers' Knowledge and its Impact. In D.A. Grouws. Handbook of Research on Mathematics Teaching and Learning. *A Project of the National*

Council of Teachers of Mathematics. P.147-164. [Online]. Available from: https://psychet.apa.org/record/1992-97586-008 [Accessed 15th May

Gokkurt-Ozdemir, B. and Soylu, Y., 2017. Examination of the Pedagogical Content Knowledge of Mathematics Teachers. *International Online Journal of Primary Education* [Online], 6(1). Available from: https://files.eric.ed.gov/fulltext/EJ1243618.pdf [Accessed 27th May 2020]

Kadarisma, G., Senjaya. E. and Amelia. R., 2019. Pedagogical Content Knowledge Pre service mathematics Teacher. International Seminar on Applied Mathematics and Mathematics Education. *Journal of Physics* [Online]. Available from: https://iopscience.iop.org/article/10.1088/1742-6596/1315/1/012068/pdf [Accessed 12th November 2020]

Kumari, K., 2015. Impact of Pedagogical Content knowledge of teachers on Pedagogical Transitional problems of Undergraduate Students. *Synopsis Submitted to Dayalbagh Educational Institute* [Online]. Available from: https://shodhgangotri.inflibnet.ac.in/bitstream/123456789/2523/1/synopsis.pdf [Accessed 14th March 2020]

Machaba, M.M., 2013. Teacher Challenges in the Teaching of Mathematics at Foundation Phase. Thesis (PHD), University of South Africa [Online]. Available from: http://uir.unisa.ac.za/bitstream/handle/10500/13262/thesis-machaba-mm.pdf?sequence=1 [Accessed 28th May 2020]

Maria, B., 2005. *To What Extent Does Leadership influence pupils' achievement in Mathematics in the Primary Schools in the Seychelles*. Thesis (MBA). University of Lincoln.

Ministry of Education., 2014. Education Sector Medium Term Strategic Plan 201.-2017 and Beyond. Mont Fleuri. Ministry of Education.

Olfos, R., Estralia, S. and Goldrine, T., 2014. Teachers' pedagogical content knowledge and its relation with students' understanding. *Center for Advanced Research in Education* [Online]. Available from: https://www.researchgate.net/publication/276060497_Teachers'_pedagogical_content_knowledge_and_its_relation_with_students'_understanding [Accessed 27th May 2020]

Shulman, L.S.,1986. Those Who Understand: Knowledge Growth in Teaching. *American Educational Research Association.* Educational Researcher [Online], 15(2),pp.4-14. Available from:

http://www.fisica.uniud.it/URDF/masterDidSciUD/materiali/pdf/Shulman_1986.pdf [Accessed 15th March 2020]

Valentin, J., 2011, Impact of the Mathematics Lesson Structure reform in Seychelles on pupils' achievement. *Proceedings of the British Society for Research into Learning Mathematics* [Online], 31(3). Available from: http://edutech.uom.ac.mu/moodle/pluginfile.php/17064/mod_page/content/7/J%20Valentin%20Maths%20in%20Seychelles.pdf [Accessed 17th February 2020]

Valentin. J., 2012. *Primary mathematics teaching reform in a small island developing state: the case of the Mathematics Lesson Structure in the Seychelles*. King's College London [Online]. Available from: https://www.bing.com/search?q=Impact+of+the+Mathematics+Lesson+Structure+reform+in+Seychelles+on+pupils%E2%80%99+achievement+&form=EDGSPH&mkt=en-us&httpsmsn=1&msnews=1&refig=02547aebdb844cdbd3ce6327f3bb1840 [Accessed 20th March 2020]

Conclusion
– A Bird's Eye View of Current and Future Issues in Education in the Seychelles

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The data recency (2018-2021) and context versatility (different school sizes and engagement of both primary, secondary and post-secondary levels) make the findings from this volume an actual up-to-date cut into education issues in the Seychelles.

An important observation, supported by findings from several papers in this book (see J. Andimignon`s, F. Bibi's J. Kilindo's and L. Lesperance's studies for example), is the discrepancy between the visions/ambitions and real state of some issues. For example, the implementation of differentiated teaching and other elements of inclusive education proves to be an area of conflict between the government's visions and plans (the introduction of *The Inclusive Education Policy* 2015) and the practical action to achieve the same. Similarly, the implementation of new ambitious curriculum approaches does not seem to be adequately supported in the field.

Teachers' and school leaders' insufficient concept knowledge and policy awareness is pointed out as one of the primary hindering factors. In 2022, there are thus teachers in Seychelles schools (73% according to Andimignon`s sample) who practise 'inclusive education' not having read *The Inclusive Education Policy* from 2015, and who think they are catering for different learning needs when their lesson plans reveal no such evidence (F. Bibi`s findings). Such lack of proper understanding of the meaning of inclusive education, its purposes and didactics among teachers is obviously a serious set-back in its realisation, suggesting the need for an increased strategical effort towards the policy sensitisation. Similarly, despite initial efforts to do so, there are today few Special Needs Coordinators left who have received formal training for this task (see J. Kilindo's study). Another example of ambitions not meeting reality due to lack of training are headteachers implementing new Competency Based Approaches (CBA) to curriculum without formal training of what this entails, and without any strategic guidance from the Ministry on how to do so (see L. Lesperance's study). There are also primary school teachers teaching Mathematics without adequate pedagogical content knowledge (PCK) on how to do so (see L. Amelie's study).

Lack of resources also seem to be a reoccurring topic hindering the realisations of the visions presented by the Ministry of Education. Lack of time and assistance to attend to students

with special needs were pointed out as problematic in all three studies in the Inclusive Education Theme. All these studies also report on a lack of support structures: mechanisms that were to be put in place to support the implementation of the IE policy never happened, and educational psychologists, speech and occupational therapists, etc. are still missing from the system.

Several papers demonstrate how educational issues, such as lack of resources, cause long-running economic repercussions. Thus, as illustrated in B. Medor`s research, insufficient social value of teachers, lack of material support of schools and lack of methodological and pedagogical support of novice teachers result in their premature attrition and high turnover. This waste of resource invested in their education is costly and causes new economic challenges through the necessity to rely on expats' services. The same negative economic impacts are brought about by insufficient attention to and understanding of students' relevant psychological state. Thus, with reference to the crucial tourism and hospitality area of professional training in the Seychelles, C. Payette demonstrates how low self-esteem in students, often manifested as academic underperformance, translates in their neglection and consequent under-achievement in the educational programs and the working place. This in turn leads to low retention in the profession and high attrition, again resulting in dependence on foreign expertise.

But all is not doom and gloom, and there are many examples of positive initiatives and models of action to address educational challenges in this volume. For example, A. Monthy`s research shows how a carefully planned and consistently implemented intervention, informed by the recent knowledge about parents` role in their children's education, resulted in parents' increased engagement and subsequent improvement of pupils' academic results. Similarly, J. Celestine's study on home schooling during the COVID-19 lock-down shows how structured and well-planned local school initiatives diverted potential learning impoverishment during the pandemic, and instead resulted in improved attainment. L. Lesperance's study on the CBA curriculum implementation processes also shows how local school initiatives, based on creativity and collaboration, manage to negotiate and overcome structural hurdles. Such examples point to the existing capacity and dedication that exists in the field, and arguably can, and should be done to benefit from this potential resource. Perhaps, local school leadership deserves more credit and autonomy to implement local solutions in response to experienced challenges.

Another striking feature of many of the studies in this book is the Seychelles obsession with attainment in the form of exam results. On the topic of attainment, it is also striking how inconclusive all studies measuring attainment against different factors such as parent involvement, teacher characteristics or leadership training are. Having read all the studies, it is

obvious that raising attainment in schools is a complex affair that requires patience and the concerted efforts and collaboration of many partners – policy makers, school leaders, teachers, parents, and last, but not least, the learners themselves. There is no quick fix!

Here we would also like to draw general attention to the fact that everything cannot be measured in exam results in core subjects. There are other values that a school has a responsibility to impart. Aspects such as care for each other, mental health, culture and respect for the world we live in cannot always be measured in exam results, but are still essential components of a nation's well-being. Arguably more research into such aspects of schooling would be of general benefit.

We also miss research into the language question (how can we support learners who have limited proficiency in the medium of instruction, i.e., English?), and research that takes a pragmatic look at the consequences of learning in schools with inadequate infrastructure design. How are learners affected by extremely hot and noisy classroom environments, for example? These are just two examples of further avenues for research.

In all this, we must however never forget our teachers. Authorities and society at large must help make the profession more attractive and give teachers the respect they deserve! If there is a single message we would like you to take with you from reading this book, it is this: Look after our teachers!

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