

# ***Catering For All Students through Adapted Physical Education***

Melanie Grech

A Dissertation Presented to the Faculty of Education in Part  
Fulfilment of the Requirements for the Degree of Master in  
Teaching and Learning at the University of Malta

June 2021

Faculty of Education  
University of Malta



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# ABSTRACT

Melanie Grech

## Catering for all students through Adapted Physical Education

The aim of this research study was to discover the perceptions and attitudes of physical educators on Adapted Physical Education (APE) and its impact on special education needs (SEN) students. Its purpose was also to determine the PE teachers' competence and confidence in adapting and implementing APE and the challenges encountered in process. The study further inquired into the effective practices and strategies utilised by physical educators to implement APE. To answer the research questions, the study adopted a qualitative research design. Data was collected through semi-structured interviews, conducted with a selection of six physical educators teaching across primary and secondary levels, within the state, independent and church sectors. Two physical educators were selected from each sector; one primary and one secondary PE teacher. The tool selected for analysing the data collected was thematic analysis approach. Findings indicated that PE teachers were familiar with APE and its purpose. However, they were not aware of the various PE models promoting an adapted approach. Results also showed that PE teachers had not been provided with adequate training on APE, however, they still felt confident to implement it, due to experience. Despite this, they described their experience with SEN students as a challenge. The greatest challenges facing PE teachers were adapting PE to students with physical impairments, the lack of information about SEN students in their class, the lack of involvement in individualised education programme (IEP) meetings, the lack of knowledge in adapting activities and the lack of cooperation from LSEs. The effective practices and strategies were related to preparations undergone before teaching SEN students and how they planned and adapted PE in mixed ability classes. Also, the domains and teaching styles used, the strategies to build good relationships and the practices for instructions were mentioned. The type of grouping, how differentiated learning was offered and assessed were also presented as effective practices. Data suggests that support from the other school stakeholders, together with suitable training for physical educators should be indispensable in the Maltese educational system as it will lead the way towards a successful educational path for SEN students.

**Masters in Teaching and Learning in Physical Education**

June 2021

Keywords: **ADAPTED PHYSICAL EDUCATION**  
**SPECIAL EDUCATIONAL NEEDS**  
**PRACTICES & STRATEGIES**

**PE TEACHERS' PERCEPTION**  
**BARRIERS**  
**COMPETENCE**

## Dedication

I dedicate this piece of work to my beloved guardian angels, my grandparents, who have always motivated me to further my studies in Masters. Unfortunately, my grandfather has passed away during my last year of study but I am sure that he is very much proud that I have made it this far.

I also dedicate this work to children who are denied from participating in Physical Education lessons or any other physical activity related events at schools, due to their unique needs.

Remember that:

*“What makes a child gifted and talented may not always be good grades in school, but a different way of looking at the world and learning.”*

Chuck Grassley

## Acknowledgements

I would like to express my underlying gratitude and appreciation to a number of people who have participated or supported this study in one way or another.

I would like to express my sincerest gratitude to my supervisor, Mrs. Lara-Tonna Grima, who not only dedicated her time and attention to guide me throughout the whole process of this research, but also contributed to my formation as a physical education teacher.

My genuine appreciation goes to all participating physical educators for their time and cooperation.

Finally, I would like to express my genuine gratefulness to my family, my pillar of strength. They are also the ones who have instilled in me sound values and principles. They have never failed to encourage me to pursue my dreams and it is thanks to them that I have managed to be where I am right now.

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## **List of Abbreviations**

APE	Adapted Physical Education
FREC	Faculty Research Ethics Committee
GEE	General Educational Environment
GPE	General Physical Education
IDEA	Individuals with Disabilities Education Act
IEP	Individualized Education Program
INCO	Inclusive Education Coordinator
IPES	Institute for Physical Education and Sport
LOF	Learning Outcome Framework
LRE	Least Restrictive Environment
LSE	Learning Support Educator
MEDE	Ministry of Education and Employment
MUT	Masters in Teaching and Learning
MTL	Malta Union of Teachers
NCF	National Curriculum Framework
NON-SEN	Non- Special Educational Needs
PA	Physical Activity
PE	Physical Education
SEN	Special Educational Needs
SLT	Senior Leadership Team
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UREC	University Research Ethics Committee
US	United States

## CHAPTER 1

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# INTRODUCTION

### **1.1. Background of the study**

Children with “a significantly greater difficulty in learning than the majority of others of the same age” (Children and Families Act, 2014, p.19) are defined as having ‘special educational needs’ (SEN). Regardless of the learning difficulties, all children should have equal opportunities in education (Tsai et al., 2013) and according to the United Nations Educational, Scientific and Cultural Organisation (UNESCO), they should attend mainstream schools and should be given equal learning opportunities with their peers (UNESCO, 2008). Along with other countries, Malta identifies inclusive education as a human right issue and has been recognised as having one of the highest number of students with SEN attending regular education amongst the 18 European Union Member States (European Agency for Development in Special Needs Education, 2012).

Inclusive schools provide educational services that accommodate all students by considering their learning needs while excluding their physical and mental conditions which enable all learners equal access to mainstream classes (Schmidt & Venet, 2012). Within such a system, all learners are provided with the same subjects, as well as Physical Education (PE) (Prakosha et al., 2018). However, for SEN students to attain the same benefits and for their needs to be fulfilled in PE, teaching practices and strategies must be based on the individual needs of each student (Auxter et al., 2010). It is therefore the physical educators’ role to adapt PE that reaches out to each individual by addressing the students’ specific educational needs (Njagi, 2014). It is the educators’ responsibility to understand students’ unique need and to provide them with a level of education that accommodate individual needs (Levy, 2008). Therefore, regular PE should be modified and adapted to students’ needs and abilities by altering to Adapted Physical Education (APE). APE is a PE program that is modified to meet the unique needs of individuals (Winnick & Porretta, 2017).

### **1.2. Problem statement**

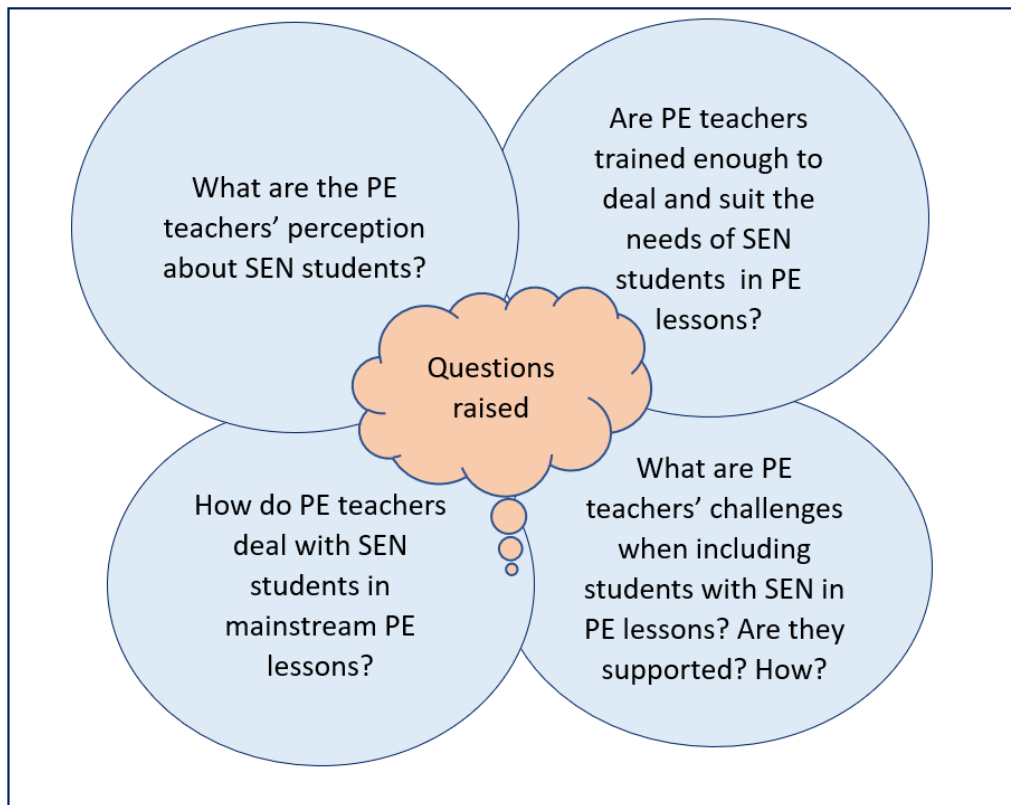
A majority of the literature has mainly engrossed on the perception of physical educators on inclusive education and their attitudes in including students with disabilities in mainstream PE settings in Malta. To date, no studies have focused primarily on APE in local Maltese schools. As a result of inclusion, the need for adaptations and modifications are becoming increasingly significant for the success of students with SEN in schools. There is the need to examine the instructional practices, accommodations and modifications being used by PE teachers to ensure that all needs and abilities are being catered for. This study aims to assemble the teaching practices that are currently being utilised by PE teachers when dealing with SEN students and aims to provide PE teachers with recommendations to make adaptations successful in their classrooms.

### **1.3. My position in the research study**

During my experiences as a badminton coach, I had a couple of occasions where children with individual needs were under my care. It was indeed my responsibility to cater and to provide a positive sporting experience to all children. However, despite that I had furthered my studies in Bachelor in Science (Honours) in Sports and Physical Activity at the University of Malta, I still did not consider myself competent in adapting sessions for the needs of different abilities. Besides this, during my observations at schools as part of the Masters in Teaching and Learning (MTL) course, I observed that students with SEN, most often, lacked participation in PE lessons. I observed how physical educators adapted PE lessons so as to include all students. Despite that some were very embraced and involved, others were totally excluded. Eventually, this piqued my interest in identifying the perception, competence and confidence of physical educators in this regard. This also evoked my curiosity to delve deeper into models, practices and strategies that address APE.



Some reflections helped me raise certain questions such as:



*Figure 1.1. Questions developed through my reflections*

These questions and reflections were the initial step of this research which led me to research more in depth about PE models and to explore further how PE can be adapted successfully to ensure that all students are fully included in PE lessons. These thoughts guided me in forming the four research questions, the focal point of the study.

#### 1.4. Aims and objectives

The main aim of the study is to investigate the perceptions of physical educators about APE as well as SEN students in both Primary and Secondary schools in Malta. The research questions are presented in the figure 1.2.:

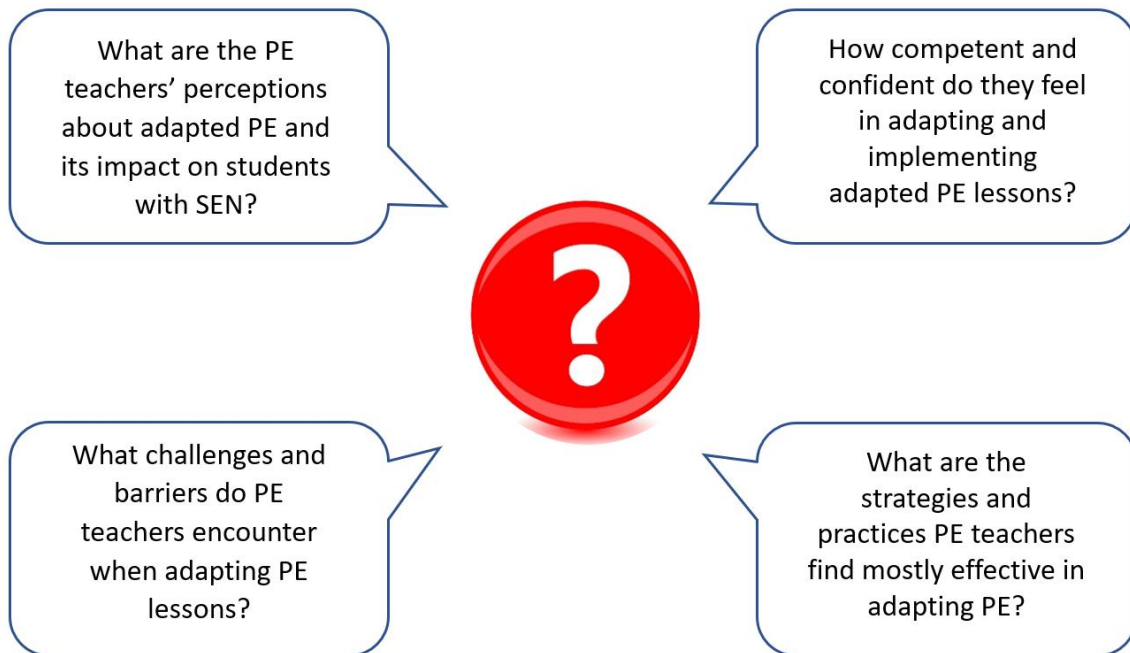


Figure 1.2. Research questions of the study

### **1.5. Structure of the study**

The first chapter presents a description of the aims and objectives of the study and the research questions. It also outlines the experiences of the researcher that instigated curiosity to conduct the research study. The literature review chapter consists of an overview of the existing literature which connects to the research questions. This presents information about APE, the factors affecting PE teachers' confidence and competence, the challenges, strategies and practices of implementing APE. The third chapter outlines the methods used throughout the data collection process of this research. This also includes the selection process of the participants and also presents the ethical considerations of the whole process. The following chapter displays the results obtained from the data collection process. The fifth chapter delivers a discussion sustained with literature and offers various arguments in line with the results obtained from the collected data. The final chapter presents the main conclusion findings of the research study and outlines suggestions and recommendations for future research study.

### **1.6. Conclusion**

This chapter has established a starting point for my research strategy by presenting the main aim of the study and its research questions. It has also provided my positionality in the study and a brief description of what the subsequent chapters will display. The following chapter presents existing literature with reference to my area of study.

CHAPTER 2

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# LITERATURE REVIEW

### 2.1. Adapted Physical Education

Students who are not able to participate safely and successfully in mainstream PE, must be provided with adaptations suited to students' conditions and abilities (Lavay et al., 2010). PE may be adapted or modified to address the individualised needs of students having gross motor developmental delays (Winnick & Porretta, 2017). Both APE and PE put an extensive attention on the promotion of physical activity (PA), gross and fine motor development and personal-social skills. However, APE includes modifications of objectives, activities and methods so as to provide an individualised education to meet their needs (Etzel-Wise & Mears, 2004). APE is regarded as a field of PE as it provides safe, self-satisfying, and successful experiences for students of unique needs (Winnick & Porretta, 2017).

Individuals with Disabilities Education Act (IDEA), (2006) defines PE as the

*“development of physical and motor fitness, fundamental motor skills and patterns, and skills in aquatics, dance, and individual and group games and sports”*. (as cited in Winnick & Porretta, 2017, p.13).

APE is defined as

*“an individualized programme including physical and motor fitness, fundamental motor skills and patterns, skills in aquatics and dance, and individual and group games and sports designed to meet the unique needs of individuals”* (Winnick & Porretta, 2017, p.31).

The definition is expanded by Auxter et al. (2010) by expressing that:

*“APE is the art and science of developing, implementing, and monitoring a carefully designed PE instructional programme for a learner with a disability, based on a comprehensive assessment, to give the learner the skills necessary for a lifetime of rich leisure, recreation, and sports experiences to enhance physical fitness and wellness”* (p. 3).

## **2.2. Adapted PE in the Maltese educational context**

The introduction of inclusive education in Malta, has given the opportunity to students with SEN to participate in PE lessons together with regular students in one educational institution. According to Peterson and Hittie (2003), inclusive education is the full active participation of all students in mainstream schools by adapting “multiple strategies to support access to information and expression of learning” (p. 437). The National Curriculum Framework (NCF), published by the Ministry of Education and Employment (MEDE) recognizes the significance of diversity amongst learners and the value of providing “a flexible, coherent and diversified curriculum aimed at catering for students’ varied interests, needs and abilities” (MEDE, 2012, p. 62). In recent years, there was a transformation of objectives for teaching and guiding educators of all subjects, namely the Learning Outcomes Framework (LOF). The LOF is one of the targets of the NCF and emphasises on leading to more curricular autonomy of schools, so as to better support vulnerable learners and better address their needs (MEDE, 2012).

The NCF promotes adaptable learning strategies and “the use of pedagogies that are inclusive in nature and cater for diversity” (MEDE, 2012, p. xiv). Teaching and learning strategies need to be individualised and it is necessary for educators to know students individually by understanding “their cultural background and personality, their interests, learning profile (ways of learning), and readiness levels (previous learning in each area of the curriculum)” (Bartolo et al., 2007, p. 3). This elucidates the significance of the individualised education programme (IEP). The Malta Ministerial Committee on Inclusive Education (2000, p.4) affirms that an IEP is “a concise and practical written plan” collaboratively developed by “the school, the parents, the student (where appropriate), personnel of the education division, and other community services necessary or involved in a student’s life”. According to the NCF (2012), an IEP helps in discovering the educational progress and learning needs of students. It addresses the physical, cognitive, social and emotional needs of learners through individualised objectives and outcomes (MEDE, 2012).

However, despite that the NCF (2012) is seen as a significant tool that supports educators in sustaining practices of high standards, a report of the Malta Union of Teachers (MUT), (2011) suggests that policies for inclusive education are not consistently followed by pedagogical guidance (European Agency for Special Needs and Inclusive Education, 2014). In fact, the Maltese educational system provides flexibility to schools to alter and modify existing pedagogies and professional beliefs and re-shape practices and strategies in a way that is sufficient to all learners' abilities and needs (MEDE, 2019). It is therefore up to the educators' competencies to implement effective teaching approaches that acknowledge diversity. In fact the NCF (2012, p. 10), underlines that

“teachers need to operate flexibly within this framework to reach the specific learning outcomes that young people ought to possess at the end of a learning process”.

According to the NCF, the continuous professional development and support provided to all educators, enable them to interpret the framework and adapt it to the learners' needs. With regards to PE, the NCF encourages educators to collaborate with parents and the wider community to ensure meaningful and long-lasting experiences. The NCF (2012) enables educators to recognise how learners can access the same curriculum in every learning area. However, physical educators are not provided with guidelines on how to adapt PE for different needs as it is up to the PE teachers to identify practices and strategies to implement APE so as to cater for SEN students during mainstream PE lessons.

### **2.3. Adapted Physical Education curriculum**

APE, which is a special educational programme provided to students whose needs cannot be adequately met in other PE programmes, was originated in United States (US) and has now also gained attention in other countries. Locally, the PE curriculum does not make any reference to APE but depends on the implementation of the guidelines given through the NCF and LOFs. This allows PE teachers to reach all students and to adapt activities within PE lessons to meet their specific needs.

The APE curriculum in the US offers the same content as the General Physical Education (GPE) curriculum. However, the difference in the APE curriculum are the modifications provided for SEN students. As an overview, the motor skills introduced during the primary school years focus on fundamental motor skills, cardiovascular endurance, flexibility and muscle strength including gross motor skills such as running, jumping and kicking and fine motor skills like gripping and grasping. It also focuses on balance and coordination through activities involving hand-eye coordination. At the elementary school level, the fundamental motor skills are applied within activities and sports such as dance, swimming, individual sports, outdoor activities, and fitness. During the secondary school years, the curriculum focuses on the student's capacity to lead a physically active lifestyle, based on their previously gained skills. The aim is to help SEN students to find physical activities that they mostly enjoy to complete being physically active on a regular basis in the transition to adulthood (Garrahy, 2015).

#### **2.4. The purpose and benefits of APE**

APE is aimed for infants and toddlers who require early intervention services as they encounter either cognitive, physical, social or emotional developmental delays. It also targets children who have been diagnosed with physical or mental conditions leading to a developmental delay (IDEA, 2004, cited in Winnick & Porretta, 2017). APE also targets those students who require individually designed programmes due to their different needs and abilities. Moreover, APE includes students who have injuries, medical conditions, low fitness levels due to obesity or excessive leanness, inadequate motor development or low skills and poor posture (Winnick & Porretta, 2017).

APE provides SEN students with an equal opportunity to acquire the same benefits of PA as non-SEN students. Specifically, it encourages physically active lifestyles, socialising opportunities through movement, emotional benefits and accessibility to community (Garrahy, 2015). APE provides students with fundamental motor skills required to engage in movement opportunities. Its priority is to ease participation of SEN students with typically developing students in age-appropriate activities (Block & Obrusnikova, 2007). Also, the idea



of APE enhances self-actualization in finding out their capabilities. APE produces physically educated people who will be able to follow life-long physical activities and healthy lifestyles which are gained through experiences associated to psychomotor, cognitive, and affective domains of learning. APE also increases independence in SEN students, improves their self-esteem, confidence, responsibility and self-help skills (Winnick & Porretta, 2017). APE enhances collaboration, cooperation where opportunities for interactions and development of friendships are uniquely offered to all students (Timura, 2017). Substantially, APE strives to develop students to their maximum (Sherrill, 2004).

## **2.5. Implementation process of Adapted Physical Education**

In the US, qualifying students for APE occurs through a process which includes reference to the special education committee, assessment to determine unique needs and evaluation of data to determine eligibility. It also includes recommendation for placement, formulation of objectives for the IEP, programme planning and implementation, and reevaluation to ensure that progress is occurring (Columa et al., 2010).

### **2.5.1. Identifying students**

It is important to determine eligibility of students for an APE programme. In some cases, identifying unique needs of students is obvious, but in other instances, assessment data is analysed and compared with the official criteria (Winnick & Porretta, 2017).

### **2.5.2. Testing and Assessment**

The school needs to determine whether or not the identified student requires an APE programme. To determine if students have individualised needs, they should undertake a formalised assessment. The students identified for APE should be provided with an individualised programme, with specific objectives based on their unique needs. This leads to selecting the appropriate educational placement in the least restrictive environment (LRE). Schools determine unique needs and select goals and objectives in conformity with the educational placement. It is crucial that physical educators are involved in determining the individual needs of students (Winnick & Porretta, 2017).

### **2.5.3. Placement**

Depending on the nature of the students' needs, SEN students in US schools are placed in levels for PE lessons (Davis, 2009). APE can be implemented in an array of settings that range from integrated classes, which is the GPE, to segregated classes which include only SEN students receiving APE. Students receiving an APE programme, whenever appropriate, are included in a group setting and provided with support. In fact, when placing students in levels, the GPE class is the first placement considered, where teachers modify activities and instructions so that SEN students' individualised objectives can be met in a mainstream class (Winnick & Porretta, 2017).

As figure 2.1. displays, there are three levels at the bottom of the continuum where placement in a GPE is provided. Placement in level 1, is for non-SEN students or those students having short-term needs that can be met in the GEE. This placement is also suited for SEN students whose unique needs illustrated in an APE programme, can be implemented in the GPE setting. Placement in Level 2 is for SEN students whose APE programme can be met in a GPE with the support services of an LSE (Winnick & Porretta, 2017). Placement in level 3 is also a GPE which requires more frequent support services. This might require students to spend some time from the PE class, supervised in a resource room.

Students who should be in a part-time special class, are placed in level 4. At times, their needs might be met in a GPE class or in a segregated environment. Those students whose needs can only be met in a special class, are placed in level 5. When part-time or full-time one-to-one class is appropriate, students are placed in levels 6 and 7. Levels 8 and 9 are appropriate when students' needs are met outside the school such as in special schools, hospitals or at the students' homes. In such situations, it is the schools' responsibility to ensure that appropriate education is provided (Winnick & Porretta, 2017).

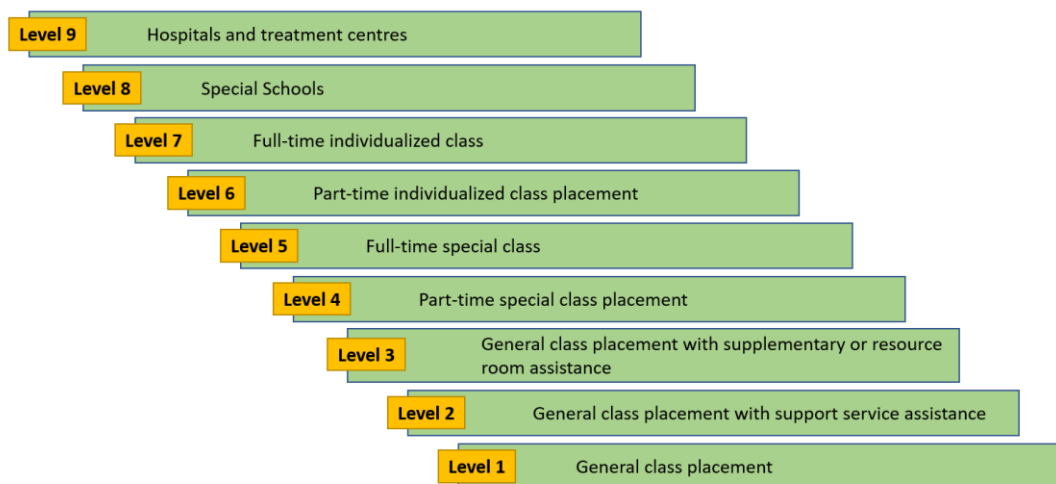


Figure 2.1. A continuum of alternative instructional placements in Physical Education

(Adapted from Adapted Physical Education and Sport, P. Winnick & D. Porretta, 2017, p.72.).

When students begin their APE placements, the IEPs should be reviewed annually to measure whether the individualised goals have been reached. Every three years, an evaluation by the IEP teams and assessment are conducted (Garrahy, 2015).

## 2.6. Teaching Adapted Physical Education

APE is not only delivered by specialised educators, but is also provided by GPE teachers. Thus, more students benefit from this service as few PE teachers are specialists in APE (Winnick & Porretta, 2017). In fact, globally, most schools, including Malta, do not have certified APE teachers. Therefore, GPE teachers are the ones teaching SEN students, regardless of their lack of professional preparation in this area (Garrahy, 2015).

PE teachers teaching SEN students must be knowledgeable of the different types of disabilities. Physical educators should have the knowledge to use teaching methods beneficial to students and be able to provide individualized instructions and opportunities. PE teachers should be able to plan and modify the PE curriculum by adapting it to the needs of students, based on assessments and IEPs. They need to determine which activities are suitable for different needs and what modifications are required to support students in reaching their objectives. Physical educators should create variations in activities such as

changing rules and equipment and should know the variety of behaviour management practices which include providing clear, concise rules and routines. They should be aware of the technology available to increase learning such as assistive devices for communication and specialised equipment (Winnick & Porretta, 2017).

### **2.6.1. Learning support Educators as assistants in APE**

Support from learning support educators (LSEs) is required to meet the needs of SEN students. This support may include accompanying SEN students to classes and providing assistance (Block & Obrusnikova, 2007). In regular PE settings, LSEs are responsible for enhancing participation, instruction and interaction to SEN students as well as maintaining students' safety (Davis et al., 2007). The assistance provided by an LSE, can increase skill performance and social interactions for SEN students in mainstream PE lesson (Haegele & Sutherland, 2015). However, Grenier (2010) noted that LSEs often lack the experience and training to support SEN students during PE lessons. Despite this, the requirement of an LSE in classes, including PE is ever increasing (Egilson & Hemmingsson, 2009).

### **2.7. Physical Educators' perspective on Adapted Physical Education**

A study by Prakosha et al. (2018) determined that the majority of the teachers have quite a high perception on the purpose of APE. Most of them agree that APE is aimed to cater for SEN students, to increase students' health, to improve students' confidence in inclusive PE, to improve their socialization skills and to prevent severe damage for students with disability. They also stated that APE is implemented by taking into consideration the students' conditions and that it is the teachers' role to adjust APE. This is confirmed in another study by Liu et al. (2019) which shows that physical educators' attitudes towards APE tend to be positive. Prakosha et al. (2018) conclude that they still need to gain more knowledge in some areas in APE. Despite this, PE teachers hold positive views on APE, whether or not they have the professional background (Liu et al., 2019). Both studies also conclude that positive attitudes towards APE also reflect confidence about its implementation.

## **2.8. PE teachers' confidence and competence in implementing APE**

The implementation of successful APE depends on teachers who are crucial in creating a good learning quality for all (Prakosha et al., 2018). In effect, teachers' confidence and competence towards implementing APE depend on their perception towards students with SEN, experience, training, and support from school and home (Liu et al., 2019).

### ***2.8.1. PE teachers' perception towards SEN students***

Unfavourable attitudes of teachers toward teaching SEN students have an effect on the curriculum, pedagogical approach and the equity with which knowledge is delivered (Mauerberg-deCastro et al., 2013). In fact, teachers with negative attitudes towards SEN students may have an unwillingness to implement adapted content (Brownlee & Carrington, 2000). In particular, negative attitudes towards SEN students still exist which greatly impact the success for such students in education (Wilson & Scior, 2015). Therefore, fostering a positive attitude toward SEN students is necessary for teachers to willingly make modifications to accommodate all students in a regular PE setting (Haegele & Sutherland, 2015). Consequently, PE teachers' positive attitudes certify equal classroom accommodations and provide worthwhile learning experiences for SEN students (Block & Obrusnikova, 2007).

### ***2.8.2. Teachers' experience and professional training in APE***

Experiences in teaching SEN students and participating in training courses are also related to self-perceived competences (Mauerberg-deCastro et al., 2013). Perlman & Piletic (2012) outlined that teachers increased their confidence on teaching SEN students when they undertook courses on APE, and when they gained hands-on experience. However, PE teachers often have the responsibility to implement APE, sometimes with limited or no training and experience (Davis, 2009). Also, most of the PE teachers do not feel that they are professionally prepared to include SEN students into mainstream PE lessons (Wang et al., 2015). In addition, PE teachers' willingness to adapt PE is affected by the prior experience with SEN students. Therefore, PE teachers' keenness towards implementing APE can shape from positive experiences as well as appropriate training with SEN students (Davis, 2009).

### ***2.8.3. Severity of students' disabilities***

Teachers' attitudes and confidence to adapt the curriculum is influenced by the type of disability (Cook et al., 2007). In fact, teachers lack in confidence in adapting the curriculum for students with severe disabilities (Obrusnikova, 2008). Campbell et al. (2003) argue that although most teachers are in favour of including SEN students in GPE, they are only inclined to accept students with mild physical disabilities. For instance, teachers are more confident teaching students with learning disabilities than those with emotional and behavioural disabilities who are easier to deal with (Obrusnikova, 2008).

### ***2.8.4. Help and support provided to educators***

The support provided to SEN students can effect teachers' attitudes and confidence in implementing adaptive teaching. When extra support is provided by LSEs in the classroom, most of the teachers hold higher positive views on students being included (Cook et al., 2007). On the other hand, educators with insufficient support in mainstream classes, hold negative views towards inclusion (Gaad & Khan, 2007). Educators feel more confident including SEN students in the mainstream when they are supported by LSEs (Anati, 2013). However, obtaining support in other subjects is easier than getting support in PE (Morley et al., 2005).

### ***2.8.5. Accessibilities, resources and equipment***

The US Department of Education (2011) claims that equipment and facilities are an issue of accessibility. As such, inadequate and insufficient equipment, resources and facilities lead to great challenges for the implementation of quality PE lessons to all students (Hardman, 2008). Rose and Meyer (2002) argue that teachers should be equipped with resources and facilities to be able to adapt diverse methods of teaching so as to meet the different abilities. This is so as educators are more likely to implement adaptations when resources facilitate the mobility of students with diverse disabilities (Anati, 2013). Also, specialised equipment helps SEN students to successfully participate in PE lessons (Vidal, 2017), to acquire a better educational experience as well as allows teachers to feel more confident in reaching students' full potential (Gaad & Khan, 2007).

### **2.8.6. School and parents' support**

Baglieri & Shapiro (2012) highlighted the significance of establishing good relations between schools and students' relatives. Establishing a good relationship and communication between educators and the relatives of SEN students, allows teachers to get to know the child better and to share common practices and goals. Therefore, getting to know the students better as well as successful strategies and practices enable teachers to feel more confident in implementing adaptive teaching (Cox, 2005). Collaborating with parents helps in improving the child's educational outcomes (Micallef, 2018).

## **2.9. PE teachers' challenges in APE**

Despite that PE teachers are generally positively inclined towards APE (Liu et al., 2019), they also face a number of challenges in successfully implementing APE (Obrusnikova & Dillion, 2011). Teachers' responsibilities and challenges increase when having SEN students in class. It is challenging for educators to provide quality and effective education to all, to support them in reaching their highest potential and to protect the well-being of SEN and non-SEN students (Ismail et al., 2016). The difficulties encountered when implementing APE in a mainstream setting include lack of knowledge about SEN students in relation to PA, difficulty of activity selection and adaptation, lack of training, low interest of the non-SEN students to participate with SEN students, difficulty of communication, difficulty of identifying the needs, attitude of parents of SEN students, difficulty of class management, and lack of teaching aids (Bekele, 2017).

### **2.9.1. Insufficient training and knowledge gap in addressing effective practices**

Teachers experience difficulties in adapting the curriculum, finding appropriate materials and getting any training to increase their skills and knowledge to include SEN students in GPE. In fact, some teachers feel deficient in their teaching abilities to cater for different needs (Davis, 2009). Lavay et al. (2010) addressed the lack of information about its effective instructional practices as challenges. Rathvon (2008) argues that teachers must solve challenges based on their own experiences as there is lack of research in this field. Therefore, teachers fail to support students' needs due to inadequate knowledge and training (Johnson, 2015).

### **2.9.2. PE teachers and APE as devalued in schools**

Globally, both PE and APE teachers in schools are valued less than other subject teachers. This causes schools to fail in addressing the PE needs of SEN students during IEP processes (Block et al., 2011). Although schools might address the PE objectives in IEPs, numerous schools fail to provide detailed information about the child's abilities and needs in PE lessons (Columna et al., 2010). This is so as PE teachers are often not included in IEP processes, leaving other specialists or professionals to address the PE needs, thus contributing to the lack of importance of APE (Kowalski et al., 2006). This may imply to parents, teachers, and administrators that APE is not important for the student. Therefore, APE teachers should be part of the IEP team and should be involved in writing goals and objectives (Lieberman & Houston-Wilson, 2011).

### **2.9.3. Shortage of qualified educators in the field of PE**

APE specialists also feel deficient to address the needs of SEN students (Combs et al., 2010), as they lack experience and knowledge of APE. This is so as during their formative process, they encounter limited contact with APE and SEN students due to the shortage of qualified APE teachers. Therefore, they lack in having a clear view of what APE teachers actually demand and experience an incomplete apprenticeship (Richards & Wilson, 2019). Therefore, according to Liu et al. (2019), the most serious problem is the lack of qualified educators who can provide a high-quality educational service.

## **2.10. Strategies, practices and models to implement APE**

Adaptations occur when teachers make modifications in objectives, methods of assessment, content, instructional materials, teaching styles, and instructional strategies and practices. Adjustments, variations, and modifications in curriculum and teaching methods are made to suits students' needs and to maximize their learning (Winnick & Porretta, 2017).



### **2.10.1. Instructional modifications**

Instructional modifications are adjustments performed to the organisation of the class and to the information presented by an educator to better accommodate students with SEN (Wilson et al., 2016). Teachers can use various instructional strategies including altering tasks, varying equipment, and peer tutoring so as to cater for the needs of SEN students in a mainstream PE lesson. In particular activities, teachers might separate SEN students from their peers to provide individualised instruction to better accommodate their learning needs (An & Meaney, 2015).

### **2.10.2. Direct Instruction**

Direct instruction is a teaching technique directed by the teacher involving one-to-one instruction. Direct instruction allows teachers to address students' specific needs. Repetition is another adaptation which permits the repetition of rules and instructions. Teacher modelling allows teachers to demonstrate skills that students need to perform and learn. Peer modelling is used when a student in class demonstrates a skill as instructed by the teacher. Another adaptation is the hand over hand which requires the physical movement of the student's hand to assist in demonstrating a skill (Timura, 2017).

### **2.10.3. Operational Guidelines**

Operational guidelines include adaptations that help in the general running of the lesson. This includes physical objects such as markers and cones to indicate the area of play, the set-up of the activities and rules. Visual directions aid students in their tasks as they read what they need to perform. This can be done in parallel to verbal explanations which allows for greater retention from students. Setting up stations in PE lessons where students rotate to different stations and perform different activities, can also be used as an adaptation. Shortened activities prevent fatigue and address attention issues in students with cognitive disabilities (Timura, 2017).

#### **2.10.4. Physical/Visual instructions**

Particular students with SEN may respond better to pictures rather than to written or verbal cues. Visual adaptations such as pictures help SEN students to know where to go next during an obstacle course. Cue cards also act as visual aids on performing a skill. Visual references such as picture schedules can help such students to understand the next step after they complete a skill. Checklists can also empower students to work individually, where they can refer to the check-list rather than involving the teacher. Task cards are also physical reminders of what and how students should carry out a task or skill (Timura, 2017).

#### **2.10.5. Peer tutoring**

Peer tutoring refers to a student instructing another student and can be used to provide individual support to students with SEN in PE lessons. The use of peer tutors benefits SEN students as it increases social interactions, motor engagement as well as performance (Collins, 2012). In fact, peer tutoring increases academic learning of students in class by an average of 20.8% (Wiskochil et al., 2007). Similarly, interactions between peer tutors and SEN students also increase by over 50% for all students (Klavina & Block, 2008).

#### **2.10.6. Differentiated instruction**

Differentiated instruction is a student-centred approach that assist students in achieving individualised objectives (Ellis et al., 2009). Garrahy (2015) recommends organizing all activities into a station format, where students work on individual goals and participate in the same lesson. Each station might contain completely different skills and levels, based on the students' needs. Teachers can also ask LSEs to help with instructing students at different stations. This also includes planning individualised lesson plans, including high and low variations which allow students with different needs to reach their own individual objectives (Block, Klavina, & Flint, 2007).

### 2.11. Existing Models to Adapt PE

Different models assisting PE teachers in adapting and modifying activities to cater for specific educational needs, have emerged in recent years (Downs, 2011). These are presented in table 2.1.

STEP
TREE
CHANGE IT
AIM
FAMME
FAIER
SETT framework

Table 2.1. PE Models

These models enable physical educators to alter their approaches by providing optimal opportunities for SEN students. Adaptations may involve modifying the curriculum, adjusting the rules of the game and changing equipment by considering the texture, size, weight or colour which allow for great participation and involvement (Wilson et al., 2016). These models are similar to each other and are rather a matter of which one works best according to the circumstances including the students' abilities, needs, the activity performed and the area available.

#### 2.11.1. 'STEP' Model

The 'STEP' (Space, Task, Equipment, People) model allows PE teachers to make changes in the delivery of activities. Adjustments can be made in one or more areas of the model. The playing area and the distance covered can be varied to suit different abilities. Teachers should reflect whether all students are given equal opportunities to participate during activities. They should also break down complex skills into simpler ones to help SEN students to progress their skills more easily and should ensure that the equipment selected is suited to students' abilities. Physical educators should also reflect on splitting students into balanced teams, according to their overall abilities to maximise participation of all students (Black & Stevenson, 2011).

<b>S</b>	<b>Space</b>  Where? Where is the activity happening?	Change the space where the activity is taking place: <ul style="list-style-type: none"> <li>• Adaptation of playing area; more space gives more reaction time, less space requires more mobility.</li> <li>• Allow some students to start at different times or places.</li> <li>• Vary the distance to be covered.</li> <li>• Nearer or further away targets.</li> </ul>
<b>T</b>	<b>Task</b>  How? How is it happening?	Change the nature of the activity: <ul style="list-style-type: none"> <li>• Break down complex skills into smaller components; easier- simplify, harder- introduce more rules.</li> <li>• Change rules to aid inclusion. E.g. no contact rule.</li> <li>• Be flexible and try different ways of participation, e.g. seated.</li> <li>• Use different targets for different needs.</li> </ul>
<b>E</b>	<b>Equipment</b>  What? What is being used?	Vary equipment in: <ul style="list-style-type: none"> <li>• Size, shape, colour, texture, weight, environment, play surface, indoor/outdoor.</li> </ul> For example: balls <ul style="list-style-type: none"> <li>• Lighter- travel slow in air and allow more reaction time.</li> <li>• Larger/softer/slightly deflated- easier to see and catch.</li> <li>• Noise- audio as well as visual stimulus.</li> <li>• Different colours- easier to see.</li> </ul>
<b>P</b>	<b>People</b>  Who? Who will be involved?	<ul style="list-style-type: none"> <li>• Independently, in groups, in pairs, in teams, with friends, with LSEs.</li> <li>• Students with different/same roles, different/same ability, different/same size.</li> <li>• People in own space, big space, small spaces, restricted space, open space.</li> </ul>

Table 2.2. STEP model

(Adapted from the Sports Inclusion Model, K. Black & P. Stevenson, 2016).

### 2.11.2. 'TREE' Model

The TREE (Teaching style, Rules, Environment and Equipment) model permits PE teachers to alter the way one delivers instructions and encourages them to alter the rules of an activity for all students to be involved. It also allows teachers to change the environment to suit the needs of all the class or of particular needs. Similar to the STEP model, it allows teachers to reflect on the type or size of equipment that assists particular needs during PE lessons.

<b>T</b>	<b>T</b> eaching style	How the teacher organises, leads and communicates.
<b>R</b>	<b>R</b> ules and regulations	Make changes to the rules of the games and activities to promote inclusion.
<b>E</b>	<b>E</b> nvironment	Make changes to the space; for the whole group or individuals.
<b>E</b>	<b>E</b> quipment	Like in STEP, change the size, weight, colour etc.

Table 2.3. TREE model

(Adapted from Models of Inclusion, P. Downs, 2011).

### **2.11.3. 'CHANGE IT' Model**

Similarly, the 'CHANGE IT' (Coaching/Teaching style, How you score, playing Area, Number of players, Game rules, Equipment, Intensity and Time) model, allows teachers to reflect on adapting the scoring system of a game, to alter its rules and to divide students into small teams. It allows teachers to reflect on students' level of movement and to adjust the active time according to students' abilities and needs.

<b>C</b>	<b>C</b> oaching/Teaching style	Modify how the teacher communicates and classroom instruction used.
<b>H</b>	<b>H</b> ow you score	Modify how students score when adapting a game situation.
<b>A</b>	Playing <b>A</b> rea	Make sure that the area is safe for all students.
<b>N</b>	<b>N</b> umber of players	Reduce the number of students in each team to give all students an equal opportunity.
<b>G</b>	<b>G</b> ame rules	Apply rules to maximise equal opportunities.
<b>E</b>	<b>E</b> quipment	Adapt equipment such as size, texture and weight.
<b>I</b>	<b>I</b> ntensity	Consider the level of vigorous movement.
<b>T</b>	<b>T</b> ime	Adjust time.

Table 2.4. CHANGE IT model

(Adapted from Models of Inclusion, P. Downs, 2011).

#### **2.11.4. 'AIM' Model**

The 'AIM' (Activity Inclusion Model), allows teachers to provide activities relevant to an extensive range of abilities, needs and motivations, through open, modified, parallel and specific activities possibilities. This model permits the flexibility of teachers to alter the activity in relation to the needs of students.

<b>A</b>	<b>Activity</b>
<b>I</b>	<b>Inclusion</b>
<b>M</b>	<b>Model</b>
<p><b>Open activity</b></p> <p>Everyone can take part based on what everyone can do and does not include any modification.</p>	<p>Everyone does the same activity with minimal or no adaptations to the environment or equipment. Open activities are inclusive and suited for everyone.</p> <p>E.g. warm-up/ cool down, and cooperative or unstructured movement games.</p>
<p><b>Modified activity</b></p> <p>Change to include people to do the same activity in different ways.</p>	<p>Everyone plays the same game or performs the same activity but the rules, equipment or area of activity are adapted to include all individuals.</p> <p>E.g. throwing activity using weight implements or a tennis ball.</p>
<p><b>Parallel activity</b></p> <p>Ability groups</p> <p>Organised in ability groups, everyone takes part in a variation of the same activity.</p>	<p>Following a common activity at their own pace and level by working in groups based on their abilities.</p> <p>E.g. A group playing a seated version and another group playing a standing version of a game and participants access the version most suited to their abilities.</p>
<p><b>Specific activity</b></p>	<p>People take part in a unique activity specific to the sport.</p>

Table 2.5. AIM model

(Adapted from Activity Inclusion Model (AIM) Guidance incorporating STEP, 2017).

### 2.11.5. 'FAMME' Model

The 'FAMME' (Functional, Approach, Modifying, Movement and Experiences) model is aimed to include all abilities in PA. This model enables PE teachers to be creative and to adapt suitable activities for all students (Downs, 2011). The 'FAMME' model sets out the following four-step method:

<b>F</b>	<b>F</b> unctional	
<b>A</b>	<b>A</b> pproach	
<b>M</b>	<b>M</b> odifying	
<b>M</b>	<b>M</b> ovement	
<b>E</b>	<b>E</b> xperiences	
Step 1	Determine the components of skills and to perform a movement successfully.	
	E.g.	Throwing and catching are practised together as if they are complementary. However, when having coordination difficulties, a large ball may be easier to catch and a smaller ball easier to throw. Therefore, initial practices may involve teaching these skills separately using appropriate equipment.
Step 2	Determine the current capabilities of the student in different sport disciplines.	
	E.g.	When having a student with a lower limb impairment, one might have less modifications to consider in volleyball than teaching athletics to the same student.
Step 3	Match modifications to students' capabilities and ensure that they support inclusion.	
	E.g.	If a student is capable of holding a lightweight racket, then his capabilities are reduced if the PE teacher attaches a full-size implement to the individual's arm using a glove-bat.
Step 4	Evaluate modification by analysing whether adaptations are contributing to skill acquisition.	
	E.g.	A teacher observing the throwing action of a wheelchair user might focus on their arm action, and adjusts the positional angle of their wheelchair to the direction of throw.

Table 2.6. FAMME model

(Adapted from Models of Inclusion, P. Downs, 2011).

### 2.11.6. 'FAIER' Model

The 'FAIER' (Foundation, Awareness, Implementation, Evaluation and Refinement) is an individual-centred model which allows teachers to look for creative and progressive methods to certify the participation of SEN students during PE lessons (Downs, 2011).



<b>F</b>	<b>Foundation</b>	Identify achievable goals for each participant and target activities towards each goal.	
		E.g.	The development of strength as a short-term goal, leading to a long-term goal of improved performance in a throw. Also, identify the strengths, capabilities and preferences of the individual. Consider the resources required for the sessions, such as space and equipment.
<b>A</b>	<b>Awareness</b>	Taking into consideration any aspects specific to the individual.	
		E.g.	Consider certain communication methods, such as 'finger Braille' for blind children, or reinforcement and repetition of teaching cues. Also, focus on demonstrating skills and activities as it may be more beneficial than verbal explanations.
<b>I</b>	<b>Implementation</b>	Construct the activity upon the factors identified in the foundation and awareness stages.	
		E.g.	This can include changes in activities or equipment used for the successful completion of the activity goal and progress towards the long-term goal.
<b>E</b>	<b>Evaluation</b>	Observe the individual's performance and suggest modifications in technique/ equipment.	
		E.g.	Use manual guidance to help reinforce verbal instruction. Assess safety of the activity.
<b>R</b>	<b>Refinement</b>	Analyse the performance and suggest changes required to challenge the student further, or to develop a specific aspect leading towards attainment of the long-term goal.	

Table 2.7. FAIER model

(Adapted from Models of Inclusion, P. Downs, 2011).

### 2.11.7. 'SETT' Framework

'SETT' (Student, Environments, Tasks and Tools) framework targets six steps which assist PE teachers in making curricular adjustments through collaboration. This can be carried out between physical educators and LSEs who have taught the student previously and parents. This enables the collaborative team to gather information about the student and the learning goals, and allows them to select effective adaptations for the students to succeed in GPE (Bryant & Bryant, 2012 cited in Timura, 2017).

<b>S</b>	<b>Student</b>
<b>E</b>	<b>Environments</b>
<b>T</b>	<b>Tasks</b>
<b>T</b>	<b>Tools</b>
Step 1	<p>Create a student-centred collaborative planning team by sharing roles and seek adaptations for student's needs.</p> <ul style="list-style-type: none"> <li>• What are the student's current abilities and the areas of need?</li> </ul>
Step 2	<p>Gather information about the student's abilities in a variety of environments before making decisions.</p> <ul style="list-style-type: none"> <li>• What is the physical and instructional arrangement of the learning environment? e.g. classroom, small group.</li> <li>• What materials and equipment are students and teachers using?</li> </ul>
Step 3	<p>Gather information about the general educational environment of the student to decide on adaptations.</p> <ul style="list-style-type: none"> <li>• What are the instructional expectations of the student in the learning environment?</li> <li>• What specific learning tasks are essential in the student's achievement in this instructional environment?</li> </ul>
Step 4	<p>Observe the student in the general educational setting to determine differences in the student's learning needs.</p> <ul style="list-style-type: none"> <li>• What tools are being used for support and what additional tools does the student require in this environment?</li> <li>• What strategies might be used to motivate the student's performance?</li> </ul>
Step 5	<p>Create adaptations that fit the student's learning needs and outline assistive technology tools for the student.</p> <ul style="list-style-type: none"> <li>• Identify all human resources, indicate those helping the student and develop a timeline for implementation.</li> <li>• How to use these tools and strategies to support the student and what training is needed to use these tools?</li> </ul>
Step 6	Continual communication between members.

Table 2.8. SETT model

(Adapted from The SETT Framework: Is It What You Think It Is in New Zealand?, J. Zabala, 2019).

## **2.12. Conclusion**

This chapter presented the definition of APE and the benefits it offers to SEN students. It also offered a description of how it is implemented in US schools in comparison to the Maltese context. The perception of PE teachers on APE, as well as the factors affecting their confidence towards implementing APE, have also been highlighted. Reference has been made to PE teachers' challenges when implementing APE and the practices, strategies and PE models that can assist physical educators to effectively implement APE have also been mentioned. The following chapter provides a detailed explanation of the research methods used for this research study.

CHAPTER 3

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# **METHODOLOGY**

### **3.1. Introduction**

This chapter explicates the aim of this research study and the epistemological perspectives of this study. It also outlines the research design, the approach used and the rationale for the approach. It highlights the ethical considerations upheld and the procedure taken to invite potential participants to be competent to consent, as well as the methodology and research tools used to collect and analyse the data.

### **3.2. Aim and Research Questions**

The aim of the study is to discover the perceptions of physical educators about APE as well as SEN students in both Primary and Secondary schools in Malta.

Therefore, the research questions of this study are:

1. What are the PE teachers' perceptions about APE and its impact on students with Special Educational Needs?
2. How competent and confident do they feel in adapting and implementing APE lessons?
3. What challenges and barriers do PE teachers encounter when adapting PE lessons?
4. What are the strategies and practices PE teachers find mostly effective in adapting PE?

The results of this educational research can be used to improve physical educators' practices and strategies in effectively implementing APE. This can only be done by understanding PE teachers' perceptions and the challenges they encounter while implementing APE.

### **3.3. Ontology and Epistemology**

A research is framed by a series of related assumptions. In fact, a research study is predicated on four 'building blocks' which are ontology, epistemology, methodology and methods (Grix, 2010). These aid the researcher explore various ways how the nature of an educational research can be presented.

The first question that the researcher asks is related to ontology. Ontology examines the nature of reality and questions what reality is. Ontological positions exist along a continuum from realism to constructivism. In realism, there is only one truth which is beyond the perception of individuals. At the other end of the continuum is the belief that there are multiple realities constructed by individuals. Epistemology refers to how an individual understands knowledge and addresses the question of how reality is known. The corresponding epistemological positions to realism and constructivism along the continuum, would be positivism and interpretivism respectively. The ontology of positivists is that one reality or truth exists and the epistemology is that knowledge can be measured. At the other end of the continuum, existing under a constructivist ontology, interpretivism believes that there are multiple realities and the epistemology that knowledge is developed through a process of interpretation (Waring, 2017).

In addition, the methodology of the study is the reflection of the ontological and epistemological assumptions. Methodology is based on the procedures to be followed. The methodology of the epistemology of positivism is 'nomothetic and experimental in nature' while the methodology of interpretivism is 'ideo-graphic, dialectical and hermeneutical in nature' (Waring, 2017, p. 16).

The final question related to method is the techniques of data collection that should be used. These refer to the data collection methods such as interviews. Grix (2010) reinforces the importance of gaining a clear knowledge of the ontological and epistemological assumptions in a research study. This helps the researcher to understand the interrelationship of the vital elements of the research, as well as avoid any uncertainty when debating over theoretical approaches.

The ontological assumption adopted throughout this study is a constructivist theory approach, which focuses on the “views, values, beliefs, feelings, assumptions and ideologies” (Creswell, 2011, p. 429) of physical educators regarding their perception on APE and SEN students. Constructivism holds that knowledge is actively constructed by individuals, has multiple truths and that reality is determined by experiences (McLeod, 2019). Arends (1998, cited in McLeod, 2019) highlighted that constructivism relates to personal construction of meaning which is influenced by experiences of interactions, prior knowledge and active engagement with the world. Knowledge constructed with different individuals having distinctive point of views and interpretations, is crucial in the process of “making meaning” (Vygotsky, 1978).

The constructivist approach was adopted. The researcher aimed to gain knowledge from the PE teachers’ shared views and assumptions, which had been actively constructed and determined by personal experiences. The teachers’ personal experiences and views are based on their interactions with students with SEN within a school community. In addition, not all PE teachers have the same perception about the subject as constructivism allows different realities and views. This is so as different interactions and experiences lead to different interpretations and knowledge. Therefore, interviewing multiple PE teachers introduced the researcher to different views and experiences.

### **3.4. Research design**

The design of the study paves the way for “the collection, measurement and analysis of data” (Kothari, 2004, p.31). It is portrayed by Flick (2009) as a plan for gathering and analysing data that will answer questions demanded by the researcher. The research design should target all areas of the study, starting from the data collection methods to the data analysis. Cohen et al. (2007) also enunciate that the design of the research and its methodology are determined by the purpose of the research and the research questions. Given that the study is aimed at investigating the perceptions and attitudes of PE teachers on APE and its impact on SEN students, the design of the study has been directed towards a qualitative approach.

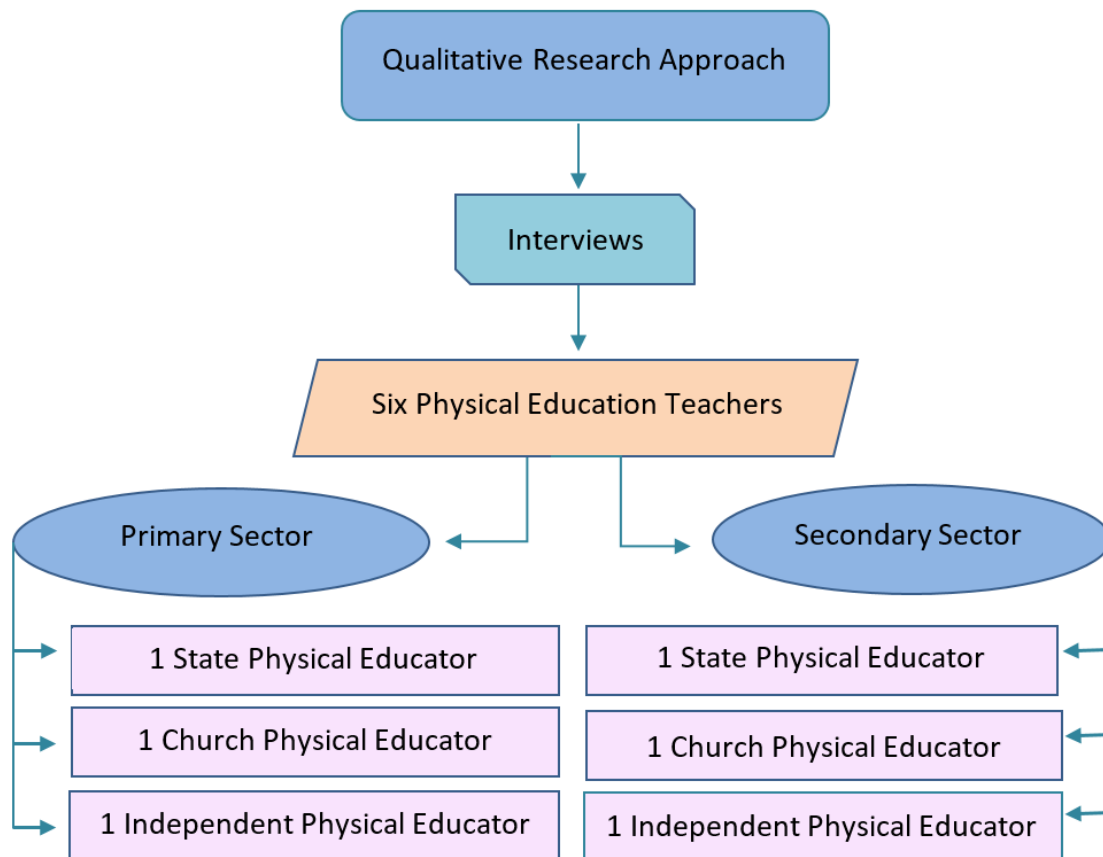


Figure 3.1. The design of this research study

### 3.4.1. Qualitative Research Methods

In a qualitative study, a researcher strives to comprehend and investigate in a natural environment where the thoughts and experiences of the participants are interpreted by the researcher (Sutton & Austin, 2015). The qualitative research gives importance to the understanding aspect which provides the researcher with a holistic depiction of an experience or situation. A qualitative study offers in-depth information that cannot be measured or analysed in quantities, amounts or intensity but is presented in a descriptive and narrative matter. A qualitative approach allows a detailed discussion on a theme which provides the researcher with a realistic insight of a participant's matter. In other terms, this research is utilised to investigate, understand, and value thoughts, beliefs, interrelations, perceptions, behaviours and structures through open-ended questions that its purpose is to further collect in-depth and complex responses (Delamont, 2012).



A qualitative method of inquiry was considered appropriate because the perceptions and experiences of teachers are both complex and subjective, hence the essence of the concepts they generate would not be captured if quantitative methods had been used (Delamont, 2012). Interviews were chosen in order not to “*restrict the views of the participants*” (Creswell, 2011, p. 205). This is so as teachers are responsible for setting the tone to the experiences with SEN students and to adapt PE. As this study will investigate the perceptions of PE teachers on APE, a qualitative method is mostly appropriate.

### **3.5. Participants of the study**

It would be superlative to use the entire population, but it is neither practical nor efficient to do so (Dhivyadeepa, 2015). Therefore, a sampling technique is a must in a study as it targets a small population. The sampling technique used for this study is the convenience sampling.

The population targeted in convenience sampling satisfies practical criteria including time convenience or willingness to be involved. Convenience sampling is affordable, easy to carry out and participants are easily accessible to the researcher (Given and Saumure, 2008). The major purpose of such sampling is to acquire data from participants who are readily available to the researcher. Despite that convenience sampling is widely used, it is not intentional and neither planned (Palinkas et al., 2013). The idea related to this sampling is that the targeted participants are homogeneous. This means that there would not be any difference in the results acquired from a random sample or co-operative sample (Etikan, 2016).

This is so as despite that the researcher had known the selected participants from previous coaching courses and being a student at IPES, the selection was based on the school sector and level. In addition, an email was sent to twelve PE teachers, of whom I had the contacts; two PE teachers from each sector and level. This allowed the researcher to select participants randomly. The researcher identified that the results were not to be any different if another method of sampling such as purposive sampling was to be used. This is so as the high probability was that the same PE teachers were to be used for the study, with the only difference having to gain permissions.

### 3.5.1. Selection of participants

The research participants selected in this study were six physical educators teaching both at primary and secondary levels in Maltese schools and hailing from the State, Church and Independent sectors. Two physical educators were selected from each sector; one primary PE teacher and one secondary PE teacher. The participants were required to participate in a semi-structured one-to-one interview which was done remotely via Skype. The maximum number of participants was that of six participants which were of any age, gender and nationality.

The six PE teachers were invited to participate in the study through convenience sampling. After having acquired ethics clearance from the University Research Ethics Committee (UREC) through the Faculty Research Ethics Committee (FREC), an information letter for PE teachers was circulated via email to twelve PE teachers (*Refer to Appendix 1*). The first six PE teachers from the twelve contacted PE teachers who showed an interest in participating, were considered as participants. Table 3.1. presents the general demographics of the six participants and more information is further displayed in table 3.2.

Sectors	Level	Physical educators	Gender
State school	Primary	1	Female
	Secondary	1	Male
Independent school	Primary	1	Male
	Secondary	1	Male
Church school	Primary	1	Male
	Secondary	1	Female
3 sectors		6 physical educators	

Table 3.1. The general demographics of the six PE teachers

### **3.6. Methods of Data Collection**

Data collection is the procedure of collecting, measuring and analysing accurate information for research through the use of validated techniques. The hypothesized questions of the study can be evaluated on the basis of collected data. After reflecting on the aim and research question of the study, a qualitative approach was selected. The tool selected to gather the data for this research were semi-structured, one-to-one interviews which were conducted with six PE teachers.

#### ***3.6.1. Single semi-structured interviews***

Interviews were designated as the best tool applied for the study. A single one-to-one interview, is one of the most increasingly used tool when conducting a qualitative research (Lichtman, 2012). An interview is described by Polit and Beck (2010) as a method of data collection enabling an interviewer to ask questions to a respondent so as to gain descriptive data. This research method offers the researcher an array of benefits including the capturing of verbal and nonverbal information, such as voice, intonation, body language, emotions and behaviours which give the researcher a clearer insight and accumulation of data (Irvine et al., 2013).

Semi-structured interviews are the greatest tool in collecting data in qualitative research. Unstructured interviews include open-ended questions that can be asked in any sequence or questions which can be added as the interview progresses. Open-ended questions and a guided conversation generate a more qualitative data as participants have the possibility to further their discourse. This helps the researcher in grasping in-depth information about the topic being discussed, with the intention of acquiring the interviewee's perception and understanding about the subject matter (Kelly, 2011). Further unexpected data which was not initially planned by the researcher, can also be extracted through the use of this tool. It also allows the researcher to analyse a concept which comes up from a reply of the interviewee. In such a research method, the researcher is able to alter or omit questions according to the replies provided by the interviewee. Therefore, this permits a flexible yet a focused dialogue between the interviewer and the interviewee (Chadwick et al., 2008).

This technique was chosen due to the researcher's interest in attaining deeper and precise insight of the participants' perception on APE. In addition, in-depth knowledge was required from individual participants which allowed the researcher to discuss the level of their competence in implementing APE and the challenges encountered. A semi-structured interview provides richer data and openness for new ideas and discussions and the real benefit lies in the data collection. It allows reliable comparability that might be missing in the unstructured interviews (Cohen et al., 2007). Single interviews were viewed the most appropriate because the subject deals with a sensitive matter and the participants might feel more confident in expressing themselves individually and anonymously rather than in a group environment.

### ***3.6.2. Piloting the Interview***

A pilot study is essential and valuable when conducting a qualitative research as it accentuates the improvisation to the main study (Majid et al., 2017). Piloting of the interview is administered to assess the method and interview guide which adds credibility and validity and enhances quality in research. A pilot study is conducted to certify that the interview questions, sequence and terminology used are reliable and allows the researcher to identify the necessity to refine and reform questions that do not elicit relevant responses or qualify to attain rich information (Kim, 2010). It also enhances the researcher's expertise in utilizing the interview platform (Malmqvist et al., 2019). Kim (2010) concluded that a pilot study should be viewed as a fundamental part of a research design.

The interview was piloted with a respondent who did not take part in the data collection process, to ensure that it is fit for its purpose. The pilot interview was timed to estimate the duration of the interview. It took one hour forty minutes and was audio-recorded to verify that the recording device was satisfying. The pilot interview was then transcribed and analysed so as to become more familiar with this process.

The piloting stage was considered as an effective stage throughout the study as it triggered a number of adjustments to the interview protocol. For instance, since the piloted interview took quite a long time, some questions which were not important, were completely removed or combined to other questions. When the interviewee seemed to be unsure, confused or asked the interviewer to repeat or to explain particular words, the wording of the sentences were altered so that the interviewee would be able to understand immediately. The introductory section of the interview was divided into two parts. The aim of the first part was to help the interviewee to understand better what the interview was about and the purpose of the second part was to assist the interviewer to gain a better picture of the school environment that the interviewed PE teacher is coming from. This is so as at the end of the piloted interview, through an unplanned question, the researcher realised that classes were streamed. Therefore, it was beneficial to include part B at the start of the interview for the researcher to gain a better picture of the school background. At the end of the piloted interview, the researcher asked the interviewee whether there was anything the participant wanted to amend or add to the interview questions. The suggestion by the participant triggered the researcher to realise that IEPs were not given much importance within the interview guide and questions about IEPs were added.

### **3.6.3. Administering the Interviews**

The appointments of the six single one-to-one interviews were scheduled via email, where an appropriate time and date convenient for the participants was agreed upon. All participants were given a consent form to sign, which was returned by email (*Refer to Appendix 2*). The interviews were conducted remotely through the use of Skype at the comfort of their home. Skype provides the voice recording feature. When the voice recording was started, the interviewees were notified that it was being recorded. When an interview was finalised, it was automatically downloaded, saved and stored on the computer and protected by a password. Most of the interviews took longer than one hour. In fact, four of the interviews took around one hour thirty minutes while the others were approximately one hour long. The room environments of both the interviewees and the interviewer were quiet with no interruptions and the audio-recordings were thus audible and easy to follow.

Interviewees were free to answer either in Maltese or English depending on which language they felt most comfortable with. From the six interviewees, one of them chose to answer and discuss in Maltese. Once the required data was gathered, the transcribing process began. The interview carried out in Maltese was translated in English and the remaining five interviews were transcribed verbatim in English. In order to help the interviewee feel confident and to develop effective interaction during the discourse, the researcher established an atmosphere of trust. This was also essential to obtain more valid and reliable data. When the researcher felt that a response was insufficient or incompetent, the question was further clarified (Cohen et al., 2007).

#### *3.6.3.1. The Interview schedule*

The questions of the interview schedule are instrumental in collecting valuable data from participants. When formulating the questions of the interview protocol, the researcher should ensure that the selected questions adequately reflect the aim and the research questions of the study (Cohen et al., 2007).

The questions of the interview were compiled with the help of international and national literature aimed at targeting SEN students and APE. The interview schedule was split up in eight sections which is elucidated in figure 3.2. The funnel approach was used and the interview guide began broadly, and progressively narrowed the topic area to the subject matter of greatest importance to the research questions (*Refer to Appendix 3*).

<b>GENERAL INFORMATION</b>	
<b>The First Section</b>	The first section (Questions 1-3) focused on identifying the number of years of teaching as well as in what sectors and level the PE teachers teach at.
<b>INTRODUCTION</b>	
<b>The Second Section</b>	The second section (Questions 4-8) emphasized on the participants' general teaching experience. This also allowed the researcher to gain a general understanding of the school environment in relation to SEN students.
<b>PE TEACHERS' EXPERIENCE &amp; ATTITUDES TOWARDS SEN STUDENTS</b>	
<b>The Third Section</b>	The third section (Questions 9-15) focused on the PE teachers' perception about SEN students and their experience. This also included identifying their perception about inclusivity, IEPs and SEN students' rights during PE lessons.
<b>PE TEACHERS' PERCEPTION &amp; KNOWLEDGE ABOUT ADAPTED PE</b>	
<b>The Fourth Section</b>	The fourth section (Questions 16-19) was intended to explore the teachers' understanding and knowledge about APE and PE models.
<b>COMPETENCE &amp; CONFIDENCE IN ADAPTING &amp; IMPLEMENTING ADAPTED PE</b>	
<b>The Fifth Section</b>	The fifth section (Questions 20-26) accentuated on PE teachers' confidence and competent in implementing APE. Questions also focused on what training, support and resources they are provided with to implement APE.
<b>PE TEACHERS' CHALLENGES &amp; BARRIERS WHEN ADAPTING PE LESSONS</b>	
<b>The Sixth Section</b>	The sixth section (Questions 27-32) emphasized on the greatest challenges that PE teachers encounter when including SEN students through APE. Questions targeted school facilities, specialised PE equipment and support provided by the SLT and LSEs.
<b>EFFECTIVE STRATEGIES &amp; PRACTICES IN ADAPTING PE</b>	
<b>The Seventh Section</b>	The seventh section (Questions 33-39) intended to identify the effective strategies and practices that PE teachers find in implementing APE. Questions focused on how they include and deal with SEN students, the teaching styles used and how they assess, monitor and set SEN students' targets.
<b>CONCLUSION</b>	
<b>The Eight Section</b>	So as to conclude the interview, in eight section (Questions 40-41) evolved around asking teachers to offer an advice to other teachers about teaching students with SEN in mainstream classes.

Figure 3.2. An overview of the chapters of this research study

### **3.7. Data analysis**

The last stage of the research methodology required the analysis of the data gathered throughout the data collection process. Data analysis relies on the nature of the study. To analyse the qualitative data collected through semi-structured interviews, a thematic analysis method was employed in this study. This is a process of formulating themes within a qualitative data (Maguire & Delahunt, 2017). According to Braun and Clarke (2006, p.6), the competencies in “*identifying, analysing, and reporting themes*” within the collected data are the main components that make up the thematic analysis. A theme is a tool that sets out important information in relation to the overall research question (King & Horrocks, 2010).

#### **3.7.1. Thematic Analysis**

The method of thematic analysis, which is a process for identifying, analysing and outlining themes within data, was chosen to interpret the data collected for this research study. This research tool was chosen due to its flexibility as it can potentially provide detailed, yet complex, account of data (Braun & Clarke, 2006).

The first step of the thematic analysis process was embarked when the data of the interviews was transcribed according to the recorded interviews. Transcription is the process of “*transforming spoken texts into written texts*” (Braun & Clarke, p. 88). Along the transcribing process, the researcher used the Microsoft Word Office document. After all the six interviews were transcribed and all transcripts were thoroughly read to further become familiar with data, the coding, categorising and ultimately, the assessment of emergent themes were carried out (Vaismoradi et al., 2013). Coding is the process of organising data into meaningful groups. The identifying of codes was carried out manually by using different highlighters and by jotting down notes of related phrases and statements next to the data. Subsequently, the researcher gathered these phrases and statements into fifty codes. Data was later classified to related categories and subcategories and up to this point of data analysis, twenty one codes were formed. These twenty one codes were aggregated and further reduced to six themes. Ultimately, the themes were reviewed and were refined to four main themes, which are related to the research aims and objectives (Braun & Clarke, 2006). As figure 3.3. depicts, sub-themes also emerged from the four main themes.



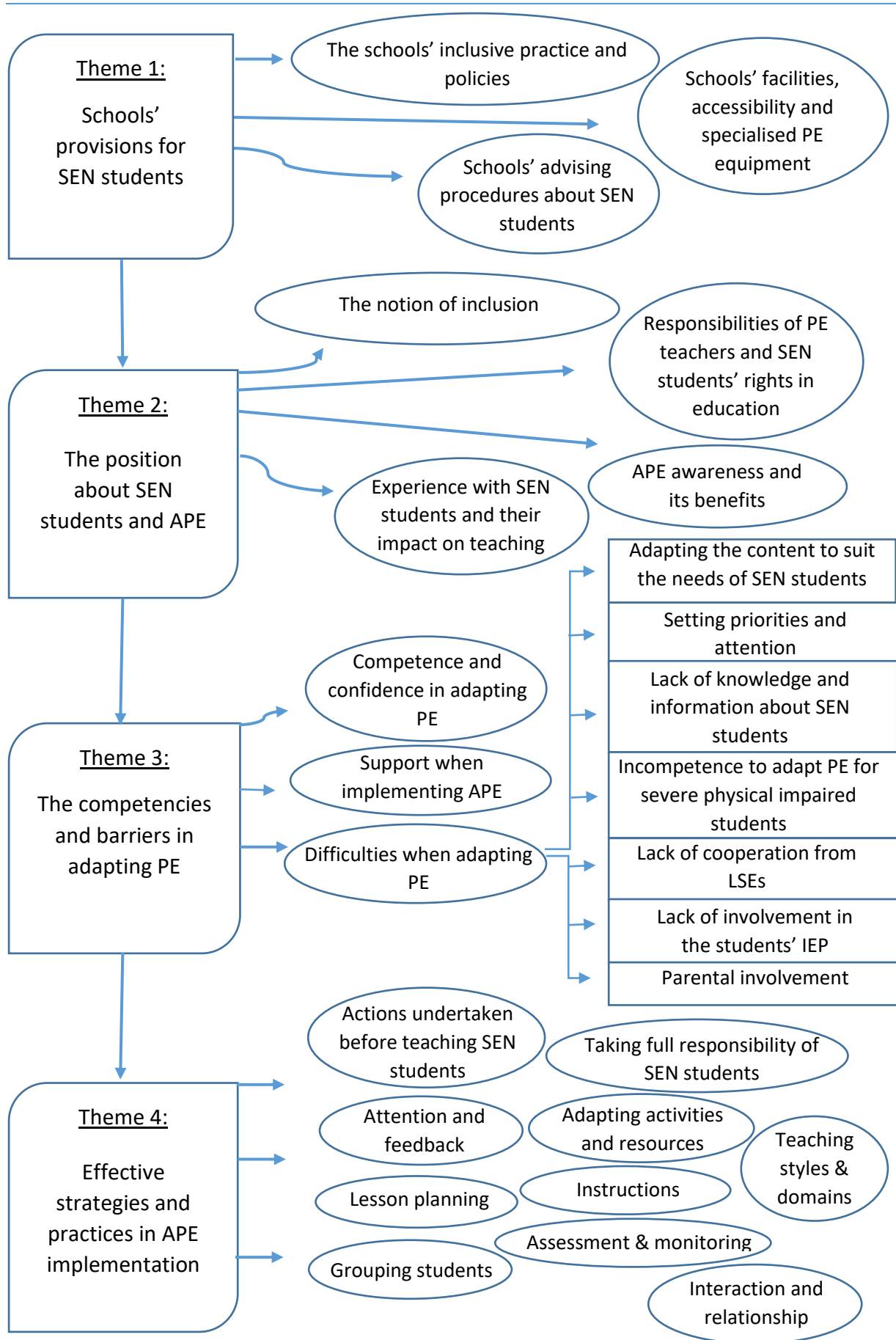


Figure 3.3. A snapshot of the emergent themes and sub-themes

### **3.8. Enhancing the Quality of the Study**

To be as random as possible when selecting the potential participants to take part in this study, an email was sent to twelve PE teachers at the same date and time. The first six PE teachers who accepted to take part, were considered as participants. This was done to avoid any bias and to ensure to produce accurate results. Also, the piloting of the interview allowed the researcher to revise any unclear or repeated questions. Some questions were also moved to other sections. The changes were grounded upon the feedback received by the interviewer which led to a definite interview protocol. The pilot study increased the reliability and validity of the study. To be as accurate and reliable as possible, at the beginning of the interview, the researcher informed all participants to ask for clarifications if questions were not fully understood. Furthermore, the interviewees were not given the interview questions beforehand. They were only provided with the aim of the study and the methods of data collection. This certified that the interviewees did not do any type of research and that their responses were based on their knowledge and perception.

### **3.9. Ethical Issues**

It is indispensable for the researcher to scrutinize the ethical issues when inquiring into research. It is paramount that in any research study, the appropriate ethical principles be applied to protect human subjects. It is of utmost importance that ethical issues are considered due to the extensive details obtained in a qualitative study (Mohd Arifin, 2018).

#### ***3.9.1. Informed Consent***

An explanation was given to the potential participants through an information letter. The participants were also provided with a consent form prior the interview, which explained the purpose, the benefits of the study and their role throughout the study. Also, how the data was stored, the participants' rights and the data collection tool. It was manifested that a semi-structured, one-to-one interview was to be done remotely through the use of Skype and the interviews were to be audio-recorded. It was made clear that their participation was voluntary and were given the option to withdraw from the study at any stage. When the participants understood what was being asked from them, they gave their consent.

### 3.9.2. Maintaining Confidentiality and Anonymity

Despite that maintaining respondent confidentiality while being presented with detailed information can be quite a challenge (Kaiser, 2009), the anonymity and confidentiality of the participants was assured throughout the research study. The identity of all participants was kept confidential and the data collected did not exploit any participants involved. The audio-recordings were saved using a pseudonym to ensure that participants were not identifiable. Participants were also given a fictitious name throughout the study as shown in table 3.2. The gathered data from this research was solely used for this study, was only accessible by the researcher and none of this information was shared beyond such purpose. Transcripts were also stored in encrypted devices and were password protected.

Participants' fictitious names	Level	Sector	Years of experience
Edward	Secondary	State	6 years
Yvette	Primary		8 years
Keith	Secondary	Independent	24 years
Mark	Primary		15 years
Brooke	Secondary	Church	6 years
Sean	Primary		8 years

Table 3.2. Information about the participants

### 3.10. Conclusion

This chapter has dealt with the methodology adopted throughout this study. The research methods and analysis used were defined and the rationale for opting for such methods were justified. To ensure the protection and safety of the participants, ethical considerations were also specified. The next chapter will provide a detailed presentation of the findings of this study which also includes the most pertinent themes emerged from this research.

## CHAPTER 4

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# RESEARCH FINDINGS

#### 4.1. Introduction

This chapter describes an analysis of the qualitative data and reveals the findings of the study. Additionally, it presents the main themes emerged from this research which were analysed by using a thematic analysis. The main themes are presented in figure 4.1.:

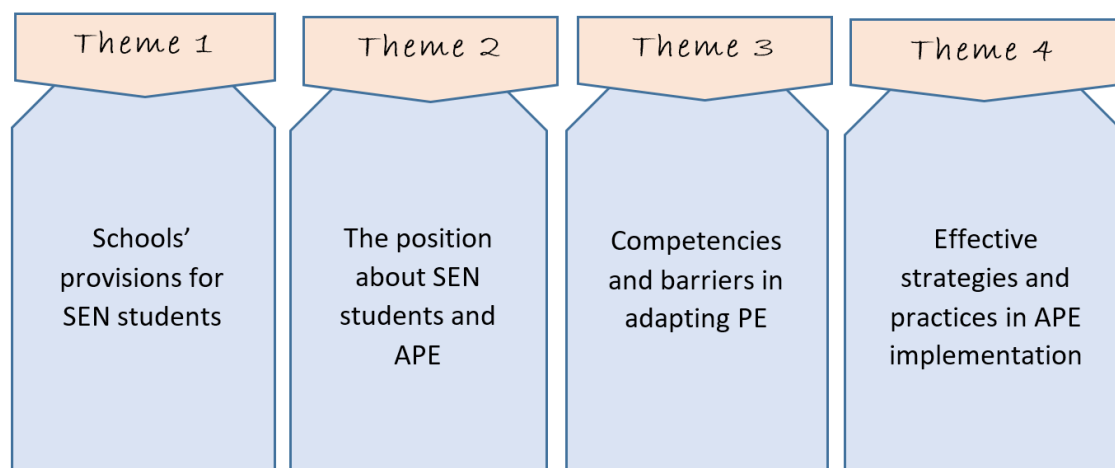


Figure 4.1. The themes emerged from the analysis of the interviews

#### 4.2. Schools' provisions for SEN students

This section deals with the inclusive practices and policies adopted in local schools and the facilities, accessibilities and PE resources available at schools. It also manifests the procedures undertaken by schools when informing PE teachers about the SEN students in their classes.

##### 4.2.1. The schools' inclusive practice and policies

According to all participants, their respective schools welcome and cater for all types of disabilities, *"from mental disabilities to physical disabilities"* (Keith). The majority of the participants stated that SEN students are integrated within classes and are not streamed according to grades. However, Edward feels that despite that his school is portrayed as following inclusive practices, *"in reality, it is not"*. He argued that students are streamed according to grades and that *"students with SEN always end up being in CCP classes"*. He added that throughout all the secondary school years, *"students with SEN are only integrated with other students who are considered as low achievers"*.

More than half of the interviewed participants replied that their schools have policies regarding students with SEN namely inclusive school approach policies and accessibility policies. Keith and Mark stated that the school is greatly equipped with all the physical resources including lifts and ramps. Keith added that SEN students are provided with a key to access the lift and are assigned a buddy who assists in holding the school bag. Both Mark and Brooke emphasized that their schools highly encourage SEN students to participate in all school activities, including physical activities. In fact, Brooke stated that *“they [SEN students] all take part in everything like all the other students”*. Mark added that the school also has an open door policy and focuses on being in contact with all parents especially when having SEN students. However, Yvette and Sean are doubtful whether such policies are implemented at their schools.

#### ***4.2.2. Schools’ facilities, accessibility and specialised PE equipment***

The majority of the participants remarked that their schools have various large premises for PE lessons while only Edward argued that the school lacks in facilities. Yvette added that large facilities help her to adapt PE for different needs by setting out different stations and by carrying out game situations with teams consisting of few students. In addition, almost all the PE teachers responded that facilities including the grounds and indoor gyms are fully accessible. However, Brooke stated that the school ground is not so accessible for wheel chair bound students, while Edward remarked that despite that the indoor facility is greatly accessible, it is not suited for wheel chair bound students.

Besides having *“the luxury of different areas to work at”*, Mark added that he also has the *“luxury of having any equipment”*. Also, the majority of the participants stated that their respective schools provide funds for equipment for SEN students. Only Edward commented that the school lacks equipment and funds are not readily available for PE equipment. Additionally, most of the participants replied that their schools do not have any specialised PE equipment for SEN students. However, Mark and Sean stated that their schools have play rooms specifically designed for SEN students with equipment suited for different needs.

### **4.2.3. Schools' advising procedures about SEN students**

Both Yvette and Edward commented that they have to ask the SLT about the kind of disabilities they will deal with as *"they will not tell us [them] anything"* (Edward). They only get verbal feedback about the students' conditions by the LSEs or teachers. Similarly, Sean responded that such information is only provided if the Inclusive Education Coordinator (INCO) approves that he can access the IEP of the student and if the INCO decides otherwise, he will not have any information. On the other hand, Brooke, Mark and Keith explained that such information is shared during a school meeting held by the SLT where all teachers and LSEs are present. They can also access additional information by viewing the IEP files of the students. Mark also holds a meeting with the parents of SEN students to gain more information while Keith also gets additional information about students' conditions and medications required from the school nurse.

## **4.3. The position about SEN students and APE**

This section displays the PE teachers' ideas and views about inclusion and APE as well as the benefits they offer to SEN students. It also deals with the attitude of physical educators towards SEN students and the impact on the said students.

### **4.3.1. The notion of inclusion**

Brooke discussed that inclusivity provides students with a holistic education and are given the opportunity to socialise with different individuals. Keith believes that every child has to be given equal opportunities even if they cannot cope with all the demands. Sean believes that inclusive education is the way forward and added that from his experience *"it has borne fruit"*. In addition, despite that there are occasions where Mark is *"sceptical about certain cases"*, he concluded that after seeing their progress, he would *"opt for inclusive learning"*. Similarly, Edward is not really sure about the concept of inclusive education in the Maltese educational system as according to him, schools *"portray inclusion as something we are doing but which we are not really implementing"*. He explained that local schools do not really cater for individual needs as it takes years to build a good relationship with a severe

autistic student and yet, the educational system changes their teachers and LSEs yearly. Additionally, he expressed that he does not agree with the concept of inclusivity when the disability of the student is severe which makes him “*question why they are in a mainstream school*”. He questioned whether the educational system is actually reaching the full potential of students with severe disabilities. However, Keith agrees with the concept of inclusion even if the case of the student is a severe one.

#### **4.3.2. Responsibilities of PE teachers and SEN students’ rights in education**

Brooke, Mark and Keith feel that the responsibility of an educator is to include all students as much as possible through all domains, to help them to fully succeed in reaching the learning outcomes and to provide them with a positive learning experience. Additionally, according to Yvette, Edward and Sean, the main responsibility of a PE teacher is to understand what SEN students are able and not able to perform, plan differently and reasonably, modify lessons creatively and to choose the right activities for all students. In order to do this, Yvette argued that a PE teacher’s responsibility is to find out about the students’ conditions to fully support their needs. Mark added that PE teachers should teach students with SEN how to listen, to wait for their turn and how to respect each other. Sean added that improving students’ coordination, balance and speed, is also their responsibility. Keith and Yvette discussed that their role is also to encourage them to take risks. Keith mentioned being involved with parents of SEN students as the role of a PE teacher.

In addition, most of the PE teachers responded that SEN students should be treated equally as the other students. Edward and Keith mentioned that they have the right to learn, to be physically fit and healthy. Mark added that it is their right to enjoy PE lessons and to develop their own capabilities at their own pace. Brooke explained that they have the right to be cared for by adapting the lesson to their needs. However, Edward feels that “*the severely disabled students are not getting the same rights as the other students*”.



### **4.3.3. Experience with SEN students and their impact on teaching**

All participants have taught students with disabilities throughout their teaching career. The most common disabilities mentioned were different spectrums of autism, different levels of Down Syndrome, physical disabilities and learning disabilities such as ADHD and dyslexia. Keith also experienced students with cerebral palsy and bone marrow cancer transplant. Also, Mark experienced deaf students while Brooke experienced students with amputations. All the PE teachers stated that they have a very good relationship with SEN students.

Despite that the majority of the PE teachers view students with SEN as an opportunity for all students in class to learn to respect and be understanding, more than half of the participants described their experience with SEN students as *“a real challenge”* (Mark). Only Brooke and Yvette described their experience with SEN students as either neutral or positive. Edward commented that when the number of students in class is high, *“one is likely to see the SEN students as an obstacle”*. Sean also argued that *“sometimes they are an obstacle, to be honest and other times they are an opportunity”*. Both Sean and Edward described their experience with SEN students as *“a challenge that every teacher needs to accept and conquer”* (Sean). They added that it is challenging to engage and motivate students with severe disabilities during PE lessons. Despite that Sean has gained experience throughout the years, he feels that there is always something new to learn as there *“isn’t one recipe which works wonders for each student with SEN”*. Keith described his experience as difficult due to the need to find ways *“to get them from super weak to weak, at least”*. Despite the challenges, Keith compares the satisfaction he feels as *“greater than any other results you achieve with top students”*. Mark also concluded that seeing such students accomplishing things and their parents’ appreciation, gives him a lot of satisfaction.

In addition, Sean, Keith and Edward replied that SEN students affect their teaching. Sean argued that *“it does affect, obviously, especially when the severity of the disability is a challenging one”*. Keith argued that SEN students affect how lessons run and progress and do not participate so much. He added *“Obviously, if I do not have SEN students in my class, the lesson can be done easily, with less hassle, with less worries, with less things to try and create”*. Edward commented that SEN students prevent him from giving equal attention and

feels that he has to “*give more attention to the students in the majority*”. Contrarily, Brooke, Yvette and Mark responded that SEN students do not affect their teaching in any way as their participation is relatively quite high and lessons progress smoothly.

#### **4.3.4. APE awareness and its benefits**

Yvette and Edward defined APE as an opportunity for all students with different abilities to achieve the same or similar goals at their own capabilities and in different processes specific to their needs. For Keith, APE allows educators to take into consideration all the different abilities and to adapt accordingly to those needs. He added that APE enables educators to find ways and means to change strategies, skills, ways and resources. Both Keith and Brooke believe that APE allows PE teachers to improvise by using different equipment to cater for different needs. Sean defined APE as offering different levels of the same activity to SEN students and is also a way to provide more challenging ones for the able students.

According to Keith, Mark and Yvette, the purpose of APE is that each child gets involved in a positive experience by practicing any skill in any way possible. Yvette added that a positive experience for SEN students is only possible when adaptation comes in. According to Sean, its aim is to help them successfully reach the learning outcomes and to reach each student’s full potential. Brooke expressed that its purpose goes beyond PA and aims to promote inclusion. Mark, Sean and Edward responded that through APE, all students benefit from the physical aspect of the subject and enables SEN students to be fully inclusive. Sean and Edward feel that APE gives a social opportunity to SEN students, improves their self-esteem and confidence and ultimately prepares them for the outside world.

All the participants are not aware of any PE models that help teachers adapt PE. Edward, Sean and Mark are unsure whether such models help in adapting PE. They argued that it is not practical reading about a model and implementing it as “*the class is the reality where one has to adapt, assess and modify*”. Sean commented that one might still need to adapt a model to the needs of students as “*a model might not work for every student with SEN*”. The other participants answered that they might be implementing these models but are not knowledgeable about them.

#### **4.4. The competency and barriers in adapting PE**

This section exhibits the training and knowledge on APE that was provided to PE teachers during their formation as educators. It also indicates whether PE teachers feel confident with teaching SEN students and to adapt to their needs. It also shows the importance that experience and support play in this regard.

##### **4.4.1. Competence and confidence in adapting PE**

Only Brooke was provided with knowledge on APE at University and opportunities to implement it in practice. She has been provided with the basic skills needed to implement APE. However, Edward replied that *"I can easily say, no, I am not trained to work with SEN students"*. Both Edward and Sean explained that they only had one unit about APE which provided them with very basic knowledge. Sean added that teacher training on APE *"was useful but I can't say that I learnt enough"*. Sean explained that it was difficult for him to deal with SEN students at the beginning of his teaching career. He was *"literally scared of having such situations in class"* and he *"didn't have any idea how to handle them"*. Although Yvette was provided with some training at University, she feels that it was not sufficient as it only involved listening to personal experiences of adults with special needs. On the other hand, Keith had never been provided with any training on APE at University. All participants concluded that University has not prepared them enough to implement APE and they agreed that more training should be given to PE teachers. Despite this, Mark and Sean feel that teachers can never be trained enough as one cannot be prepared for every case one will be facing throughout the entire teaching career.

Despite this, the majority of them still feel confident having SEN students in their classes, to adapt PE to the students' needs and to carry out activities according to their abilities. In fact, Yvette described that *"it becomes second nature to adapt"* and she quickly identifies *"what is the next step to make an activity more or less challenging"*. However, Mark only feels insecure when having a number of SEN students in one class. Keith concluded that although he is also quite confident with adapting PE, he still prefers not having SEN students in his classes. By contrast, Edward does not feel confident having SEN students in class and only feels quite confident in adapting PE to students with mild disabilities.

All participants mentioned that experience has enhanced their confidence when adapting PE. Keith believes that experience is crucial for teachers to adapt PE for different types of abilities in a mainstream class. Keith and Mark admitted that experience was the only source that provided them with knowledge on APE. In fact, Mark learnt to adapt PE *“through experience, through reasoning things out, some common sense, planning accordingly and by assessing the variables”*. In addition, Sean described his knowledge on APE as *“learning as you go along”* and through *“trial and error”* and described his confidence in dealing with SEN students as *“by time and by experience”*. Yvette concluded that *“the years of experience has taught me well”* and added that discussing with LSEs and teachers also helped her a lot in adapting PE, especially those *“who have experience under their belt”*. Despite that Brooke argued that University has provided her with training on different disabilities, she concluded that *“real learning occurs mostly by experience when being actually in schools with SEN students”*. However, Edward and Yvette concluded that training and years of experience are both needed to feel competent in adapting PE.

#### **4.4.2. Support when implementing APE**

Three PE teachers argued that the better the support network, the easier teachers will adapt. Brooke, Keith and Mark replied that they are provided with the support required by the school to effectively implement APE. In fact, when having issues or concerns regarding SEN students, PE teachers are mostly supported by the SLT, other PE teachers and other teachers. They added that teachers share their experiences, ideas and ways to deal with such students. Furthermore, the SLT listens to their ideas, provides feedback and supports them in buying resources. Keith and Mark added that they are also supported by the Head of Department, school nurse and councillor. However, Edward, Sean and Yvette feel that the SLT does not provide any support to implement APE. Sean mentioned that support is only provided by the INCO while Edward is mostly supported by PE teachers. Similarly, the only support Yvette finds is from LSEs and class teachers.

Yvette, Brooke and Mark mentioned that they are also supported by the LSEs. In fact, Yvette gets all the information needed from LSEs. On the contrary, Sean and Edward find the least support from LSEs. They argued that despite that there are LSEs *“who are very professional*

*and take their role very seriously” (Edward), “most of them need to be constantly asked to help out” (Sean). Sean, Keith and Edward added that they are only supported by LSEs who are sports oriented as they make “a huge difference during a PE lesson” (Edward). He added that such LSEs take the role of an assistant teacher, “who are very much required when having mixed ability classes or students with SEN”.*

More than half of the participants commented that since LSEs spend more time with SEN students, they get to know them better and are able to interact well with them. In fact, Edward concluded that *“the LSE is the most knowledgeable one”* about SEN students. However, despite that all PE teachers expressed the importance of LSEs, as *“the basic information about the student is mainly provided by them”* (Sean) which help them to *“plan, progress and adapt the lessons accordingly”* (Yvette), the majority of the PE teachers hardly discuss the provision of appropriate support or plan activities suited for SEN students with the LSEs. In fact, Yvette explained that such discussion takes place *“very quickly in between lessons or at the beginning of it”*. The majority of the participants briefly discuss any problems the students encounter during PE lessons, the students’ IEP and improvements. However, Edward commented that the only planning and collaboration that takes place with an LSE is when sending the schemes of work. Only Keith and Sean discuss appropriately with the LSEs. In fact, Sean emphasized that he shares ideas with LSEs at the beginning of every lesson. He added that LSEs provide him with useful information, *“as I don’t know everything either”*. At the beginning of a new topic, they verbally create specific learning outcomes for particular students, *“but we do not plan for them on paper”*. In addition, Keith commented that teachers sometimes have meetings with LSEs throughout the scholastic year in which they discuss what PE activities are suited for particular needs.

#### **4.4.3. Difficulties when adapting PE**

This section is related to the challenges that PE teachers encounter when adapting and implementing APE to ensure that all students are being catered for.

#### 4.4.3.1. Adapting the content to suit the needs of SEN students

Mark and Brooke agreed that *“it is really challenging to find suitable activities for SEN students”* (Mark). They mentioned that adapting PE well to the needs of students gets stressful as one needs to *“constantly think about every activity to make sure that it is catering accordingly”* (Brooke) and *“have to make sure you make the right choices”* (Mark). Mark and Sean argued that *“adaptation cannot always happen”* (Sean), *“as in certain situations, it is harder to adapt”* (Mark). Mark explained that when carrying out lessons focusing on jumping and hopping and there is a wheelchair bound student in class, he finds no other option other than doing something completely different. In fact, Sean commented that there are times where he only carries out minor changes but in other occasions, he *“forget[s] all about the planned activity and does something totally different”*.

Sean explained that it is a challenge to include SEN students in an individual activity such as fitness as they lack participation. However, the challenge Keith and Edward find is including SEN students in game situations. Keith argued that in a game situation, *“a student with autism confuses the team rather than helps the team”*. He expressed that he comes to an agreement with both teams and added that *“they understand because they know that the student has limited abilities and that it is not going to make a difference at the end result of the game”*. Keith concluded that such students would still be satisfied by *“running about in the court”*. Edward finds it difficult to adapt PE to CCP classes which consist of all the students with SEN of the year group *“who are only capable of doing bowling, bocci and athletics”* and very athletic students *“who are really competitive and are only engaged through games”*. He explained that when he adapts a game, *“for example, passing the ball to all students before scoring”*, students question why such rule has been implemented when SEN students are not able to catch the ball. Edward questioned *“What am I supposed to say when in reality they are right?”* He added that if he creates different drills for SEN students, he will be denying them the opportunity to experience a game situation with the others.

#### 4.4.3.2. Setting priorities and attention

Keith and Edward stated that their difficulty is to provide equal attention to all students when having big classes of mixed abilities. In fact, Edward questions whether he should prioritise the rest of the class, “*who can take something with them outside school*” or SEN students “*despite that I [he] know[s] that they will never reach their potential*”. Keith is also doubtful as he commented

*“...I can do much more work with other students ...you’re not going to slow down the process to help special students...I worry about the talented students...as I want to challenge them also”.*

#### 4.4.3.3. Lack of knowledge and information about SEN students

Mark stated that “*if one is not prepared for the situation, it could be a challenge*”. In fact, almost all participants feel that they are not informed enough about SEN students in their classes. Yvette’s greatest challenge is asking for information about SEN students, rather than receiving it freely. Sean and Keith expressed that their greatest challenge is “*to get to know each and every individual, to discover their talents and abilities*” (Keith) as “*each disability is individualistic and each case can sometimes be very challenging*” (Sean). Keith and Edward stated that it is also a challenge to “*get the most out of each and every one of them*” (Keith) when they “*lack the knowledge and abilities to actually plan an APE lesson which really targets their full potential*” (Edward). Edward added that policies and guidelines lack in providing clear information on how to properly include SEN students during PE lessons. He added “*I love the idea of student entitlement, but how?*” He also explained that such guidelines only target classroom based situations without any specification regarding PE.

#### 4.4.3.4. Incompetence to adapt PE for severe physical impaired students

Sean, Mark and Keith argued that “*the ones having severe physical disabilities are obviously the most challenging*” (Keith) and despite that they try their best to include wheel chair bound students in PE lessons, they admitted that “*some things cannot be done realistically*” (Mark). The lack of suitable facilities is a challenge that Edward finds in adapting PE to

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wheelchair bound students. Keith expressed that his greatest challenge was in *“convincing SEN students with severe disabilities not to take part in PE”* as they had serious medical conditions and were instructed by doctors not to take part in PE.

#### 4.4.3.5. Lack of cooperation from LSEs

Participants argued that they expect LSEs to support the child and the teacher, to provide information about particular students, to adapt to the needs of students in their care and to cooperate during activities. However, all participants argued some LSEs are not prepared for PE lessons. Edward described that they are *“all dolled up”* and *“wearing jeans and high heels”*. Sean specified that *“¾ of them [LSEs] do participate in the PE lesson and ¼ not at all”*. They also argued that there are LSEs who *“see a PE lesson as a free lesson”* (Sean) or *“as a break time”* (Keith). Edward and Sean added that some LSEs *“even sit by the side”* during PE lessons (Sean) and even ask to do extra work with the student in their care (Edward). Brooke and Sean argued that sometimes LSEs are not present to assist their students with physical disabilities. Sean complained that when this happens, he *“literally end[s] up staying with the SEN student or asking another student to help that SEN student”*.

#### 4.4.3.6. Lack of involvement in the students' IEP

Only Keith stated that PE teachers are included in students' IEP while the other PE teachers are only involved to fill in the IEP form or to acknowledge that SEN students can participate in PE lessons without being accompanied by an LSE. In fact, Sean commented that he *“was never present during an IEP”*. This is because the IEP meetings are usually held by the SLT, the LSE of the student concerned, the form teacher and the parents of the student. However, Edward stated that the Form Teacher is only present for the IEP meeting when free from lessons. Due to this, almost all PE teachers commented that the PE section in the IEP report lacks important information about the students' abilities in PE and are therefore not provided with enough information. Yvette also feels that certain decisions, progressions and goals set for PE within the IEP reports *“are a bit unrealistic”*. Moreover, all participants agree that PE teachers should be present during IEP meetings to provide their feedback about PE and to set realistic goals. Edward argued that it would be a great idea if all teachers

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are included in IEP meetings, however, he concluded that *“it cannot be realistically done”*. As an alternative to this, Yvette suggested that PE teachers can still be involved by discussing with form teachers or LSEs before the IEP meeting where the latter will bring forward what the PE teacher suggested. She questioned *“Since it is for the benefit of the student, why are PE teachers not asked to use their expertise during IEP meetings?”*

In addition, Edward and Yvette argued that not only they are not allowed to be present during an IEP meeting, but are also not allowed to access IEP reports or to even have a copy of the section which concerns PE. Yvette argued that she has never seen an IEP report and that she has *“no idea what it entails and how the format is”*. Sean stated that although he is given a copy of the IEP, this is only given to him in February. They expressed that the only way to access such information is to verbally discuss with the LSEs or SLT. Keith, Mark and Brooke mentioned that they are either given a copy of the IEP report or can easily access it.

#### *4.4.3.7. Parental involvement*

Sean considers the parents of SEN students as a challenge as some *“believe that their child will get to nowhere”* and *“that nothing could be done for them”*. On the other hand, he added that there are also *“parents who do not accept the fact that their child has special needs”* and who emphasize that their child should participate in every single thing that all the other students do, *“when in reality it wouldn’t be possible”*.

### **4.5. Effective practices and strategies in APE implementation**

This section reveals the practices and strategies that PE teachers find mostly effective when planning and implementing APE and when interacting with SEN students. It also deals with how information and knowledge about students’ abilities are acquired by PE teachers.

#### **4.5.1. Actions undertaken before teaching SEN students**

When Yvette, Edward and Brooke feel that they require information about the students’ disabilities, they ask the SLT for assistance. Edward gets additional information from

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teachers and LSEs. Sean argued that when having a difficult case, he discusses with both the INCO and the LSE while Keith and Brooke go through the IEP of the students before teaching students with SEN. In addition, Brooke explained that when the disability of the student is a physical one, she meets the student beforehand to get to know the student better to help her adapt to students' needs and abilities. Edward and Sean carry their own research through the use of internet before teaching students with SEN. Sean specified that he researches how to support a student with a particular disability during a PE lesson. Yvette explained that when having difficult cases, she involves the Special Olympics to help her adapt activities for their abilities. Mark and Yvette commented that they do not take any particular actions when teaching students with SEN but focus on treating all students equally.

#### **4.5.2. Taking full responsibility of SEN students**

Sean, Mark and Keith mentioned that if SEN students do not need the support of an LSE during PE lessons, they would ask them not to be present. Sean stated that he takes

*“full responsibility of such students as I feel that the 30 minute lesson without an LSE with them, would benefit the student”.*

Both Mark and Keith argued that this help SEN students to feel independent. However, Yvette added that even if students with SEN are able to cope on their own, she still prefers to have the LSE present to watch over the student and intervene only when required.

#### **4.5.3. Lesson planning**

When planning lessons, Yvette, Keith and Sean do not consider the different abilities of the students in class. This is so as they would already have planned the scheme of work and lesson plans beforehand. They added that they do not include adaptations for SEN students as part of their planning process but rather *“adapt at that time during the lesson”* (Keith). Sean feels *“that it's useless planning lessons for SEN students as it depends a lot on their moods”*. According to Keith, adaptation is *“about trial and error”* as what is planned, is not

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always the ideal. Contrastingly, Brooke refers to the IEP when planning activities suited for the SEN students. Edward believes that if the different abilities in class are not considered when planning, *“one will be excluding those students”*. Mark questioned whether SEN students will be able to reach their full potential when not considering the different abilities in class while planning. In addition, almost all PE teachers replied that they do not create an individual educational yearly programme with separate targets for SEN students but rather sets different targets from one lesson to the next according to students’ needs. Brooke feels that preparing variations of different exercises are enough and added that she only sets different goals for sports which are individualistic. Mark added that he amends his scheme of work by being creative. Only Sean makes sure to set an individual programme with separate targets when having a difficult case.

#### **4.5.4. Teaching styles and domains**

The majority of the PE teachers make use of all the domains when implementing APE, focusing mostly on the physical and social domains. However, according to Keith, the priority for SEN students should be the physical domain while according to Mark, the social aspect is more important as they learn *“how to interact, work, laugh and enjoy themselves with others”*. All the participants argued that they rarely plan for the cognitive domain when adapting PE as the activity might already be physically challenging for such students. When adapting PE, the participants found the student-centred approach and a mixture of all teaching styles to be effective. Sean also discussed that experimental learning benefits all students while Edward mentioned collision teaching. Keith sees encouragement and good communication between students, teachers and LSEs as important teaching styles.

#### **4.5.5. Adapting activities and resources**

When adapting activities, Sean and Keith initially offer the same opportunities to all students, by introducing activities which are neither too difficult nor too easy and then offer lower and higher levels according to different needs. Both Edward and Brooke added that despite that SEN students should be given equal opportunities, they should also be provided

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with adapted activities so as to develop particular skills. On the other hand, Mark and Yvette are more inclined to offer different opportunities to SEN students. They prefer to adapt the activity to students' needs from the beginning of the lesson by using the same topic. Yvette argued that although the learning outcomes should be the same for everyone, she feels it is the role of the PE teacher to adapt activities suitable for SEN students. Mark also concluded that when offering the same opportunities to SEN students, *"there are times where it doesn't work out"* and an adapted activity is provided to SEN students.

Edward, Yvette, Brooke and Mark explained how they adapt activities through differentiation to suit different needs. Edward uses the rotation system in volleyball, by preparing a low net and a higher one. He explained that SEN students will practice at the low net and the others, having their turn at the low net, will be given additional challenges. Similarly, Yvette provides more challenging skills to students who are able to dribble comfortably and provides variations to students who need more practice such as dribbling once and stopping. Brooke explained how she adapts a lesson focusing on long jump to a standing broad jump for a student with limited physical abilities by providing different goals and targets. Brooke also explained how she adapted a penalty shootout activity to suit students with physical disabilities by asking students to throw balls at the target from a sitting down position. Their friends were asked to pick up the balls and take them back to the thrower. In addition, Mark explained that when having a lesson focusing on picking up and a wheel chair bound student is present, he places equipment on buckets. Keith added that by introducing rules, wheel chair bound students can be involved in a full game with the others. The rule he likes to introduce is *"with every 5 passes the ball has to be passed to that particular students before the team can shoot"*. On the contrary, Sean believes that a wheel chair bound student cannot be involved in game situations and can only participate in small related games. In such scenarios, he introduces a free pass rolling rule where students will not be allowed to be defended.

Yvette and Sean adapt equipment through differentiated learning by using different equipment such as soft balls when doing basketball, big balls when focusing on coordination,

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large sized tennis rackets or low hurdles when jumping. In addition, Edward and Yvette mentioned that they make use of videos either at the beginning of a new topic or at the end to either introduce a particular sport or to consolidate what was covered during the lesson. In addition, both Brooke and Edward make their own resources to adapt PE such as flash cards. They use colourful materials and pictures to help students understand tasks better. Keith, Mark and Sean only adapt PE equipment by providing a different sized or textured ball and rarely use additional materials.

#### **4.5.6. Developing interaction and relationship**

Edward emphasized that rather than being their teacher, one also has to be their friend. He allows certain behaviour from students with SEN such as hugging and high five as he feels that this helps bonding with them. Not to hinder interaction, Mark added that teachers should not *“pinpoint them as being different”* or *“to section out any particular disability”* during activities. He added that one should also be careful when delivering messages by saying *“let’s move forward”* instead of *“let’s run forward”* when having a wheelchair bound student. In addition, Keith feels that disciplinary skills are also important to build a good relationship with SEN students. He added that *“you can’t be soft with SEN students because they have a disability. Sometimes you have to maintain discipline as well”* especially when they do not want to take part in PE. Contrarily, Yvette explained that she does not force SEN students to take part if they do not feel like it but rather tries to understand their needs on the day. In such situations, Yvette added that she asks the LSE to take such student in another area to perform individual exercises, *“as the student might need some alone time to get back and re-focus”*. In addition, Sean deals with such situations *“by finding the half way point”*. He explained that if students love to use a trampoline, he informs them that if they do not take part in the lesson, they will not be allowed to use it.

#### **4.5.7. Attention and feedback**

It comes natural for Edward to dedicate more time and attention to SEN students. Similarly, Sean and Mark also feel that they spend more time explaining, supporting, motivating and

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providing feedback to SEN students when compared to others. Sean added that he constantly keeps *“a watchful eye on them during the lesson more than the others”*. Mark thinks that SEN students are getting *“different attention”* as lessons have to be adapted requiring the input of more effort by the teacher to suit their needs. He explained that he also provides a slightly different type of feedback to SEN student by being more cautious of what words he chooses. Sean added that sometimes he provides *“special attention”* to SEN students when asking the LSEs *“to keep the student for another lesson”*. However, Yvette added that other than adapting to their needs during the lesson, she does *“not give special treatment”* to students with SEN. Similarly, Brooke and Keith treat all students equally.

#### **4.5.8. Instructions**

When providing instructions, Mark ensures that all students are able to see the demonstrations and hear instructions by positioning himself in front of students who might have hearing impairments. Mark also makes sure to repeat explanations so that SEN students grasp the information well. Keith and Yvette mentioned that short and precise explanations are foremost and added that combining visual and auditory instructions helps students with SEN understand better. Brooke ensures to ask students with SEN to carry out a demonstration to the rest of the class as this allows SEN students to understand better. If the activity is too difficult, she changes it immediately. Edward added that the strategy that he finds mostly effective with SEN students is providing individual group explanations.

#### **4.5.9. Grouping students**

According to Keith, Sean and Yvette, the best way to include SEN students is by dividing them into groups. All PE teachers agreed that grouping should be based on their abilities as they believe that this enhances all students' positive experience. Edward, Mark and Yvette mentioned assigning a play buddy as an effective way to group SEN students. They added that this teaches them how to work with their peers, rather than relying on an adult. When using the buddy system, Edward asks the most mature students in class to help the students with SEN. Brooke and Keith added that they also assign roles to different students such as leaders and followers as this helps them to assist SEN students.

#### **4.5.10. Assessment and monitoring**

Keith, Edward and Sean provide a varied version of an assessment to students whose disabilities are severe while adapt the existing assessment to students with mild disabilities. Edward explained that when assessing SEN students with mild disabilities, he emphasizes more on *“the fact that one is running and totally omits the time”*. He also adapts an activity by adjusting the ring to a lower position when assessing for shooting. Edward argued that when creating a new assessment sheet for students with severe disabilities, part of the marks reflect the improvement they have made throughout the scholastic year. He added that assessment criteria would be specifically created to improve individual needs. Sean mostly focuses on the fundamentals when assessing students with severe disabilities.

On the other hand, Mark is totally in favour of using the same assessment criteria by including the same goals and outcomes. He expressed that all students have their own capabilities and while some students are able to catch a ball at first try, it might be a challenge for others but if they perform it even once, it is still an accomplishment. Despite that Brooke and Yvette use the same assessment criteria for all students, they argued that they still assess students differently by *“not being too hard on them”*. Similarly, Yvette commented that it is at the discretion of the teacher to reflect the students' improvements in the mark despite that the students did not reach a certain outcome. Also, Mark concluded that when assessing students of different abilities on the same criteria, he focuses on success rather than the failed attempts. In fact, Mark explained that he

*“would give an A for having done it once and maybe the other I'll give them an A for doing it repeatedly...So their markings are almost the same as those students who do not have any special needs”.*

Sean monitors students' progress when carrying out assessments after each term while Keith monitors students' progress on a weekly basis through a continuous assessment of the learning outcomes and by taking their attendance every day. Yvette monitors students through formative feedback by providing verbal cues throughout the lessons and by carrying

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out peer assessment. They concluded that monitoring allows them to know how students are progressing. Both Brooke and Mark do not formally monitor students, however, they expressed that they do so by taking a genuine interest in them and by being understanding.

#### **4.6. Conclusion**

This chapter presented the findings of this study. It brought across the perception of physical educators in relation to APE implementation. It also manifested the PE teachers' attitude towards SEN students and its impact on the said students. The PE teachers' confidence and competence were also highlighted. Findings revealed that the experience of teachers and the support from key individuals within the school structure, were valuable in assisting PE teachers in implementing APE. The effective practices and strategies when planning and implementing APE were also underlined. The next chapter presents a discussion of the emerged findings in light of the available literature.



## CHAPTER 5

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# DISCUSSION

### **5.1. Introduction**

This chapter presents the main findings of this study obtained through the semi-structured interviews. This is with reference to the literature reviewed for said study presented in the second chapter.

### **5.2. PE teachers' perceptions**

The majority of the participants comply with the concept of inclusive education. They view inclusivity as providing equal opportunities to all students to socialise within the school. Affirming this, Cruz (2018) stated that most of the teachers shared positive views regarding the idea of inclusion. Other similar studies also show educators' views on inclusion to be positive (Bennett & Gallagher, 2013; McGhie-Richmond et al., 2013). As in the literature, teachers' positive attitude toward inclusive education in mainstream schools plays a pivotal role for the successful implementation of inclusive practices within classrooms (Kaur et al., 2016). However, two participants tend to only agree with the concept of inclusion when the disabilities of students are not severe and they are unsure whether the inclusive educational system reaches their full potential. In congruence with Mauerberg-deCastro et al. (2013), some educators are sceptical about the potential success of inclusion. Consistent with Talmor et al. (2005), teachers view inclusivity as being only applicable for some students with SEN. Similarly, Australian teachers also expressed their concern about the severity of students' disabilities when accommodating them in mainstream classes (Campbell et al., 2003). This is pursuant to Micallef's (2018) study, as most educators regard students with severe disabilities as not benefitting from an inclusive educational system. In addition, despite that some participants may be uncertain about inclusion, they still believe that it benefits SEN students. In compatible with the findings, educators are still mostly indecisive about the benefits of inclusion (Mauerberg-deCastro et al., 2013).

Regarding the PE teachers' perceptions and attitudes towards APE and the benefits it offers to SEN students, findings reveal that the majority of them are quite knowledgeable. This echoes the findings of Liu et al. (2019). Participants in the study defined the term APE as giving the opportunity to all students with different abilities, to achieve the same or similar goals at their own capabilities and in different processes, specific to their needs. They

described APE as a concept enabling teachers to consider all the different abilities, to find ways and means to change strategies, skills, and resources, by improvising and using different equipment so as to ultimately implement adaptations to those needs. However, one participant struggled with the real concept of APE and associated it not only with adapting activities for students with SEN but also as a way to provide more challenging variations for the able students. As illustrated in the literature, APE gives access to quality PE (Garrahy, 2015) by providing adaptations suited to students' conditions and abilities (Lavay et al., 2010). It addresses the individualised needs of students having gross motor developmental delays which are crucial to participate in lifelong movement. APE also includes modifications of objectives, activities and methods to meet different needs (Winnick & Porretta, 2017).

Participants in the study also have a good understanding of the purpose of APE. In parallel, Prakosha et al. (2018) found that PE teachers have quite a high perception on the purpose of APE. Participants in this research study described its aim as providing opportunities to all students to practice any skill in any way possible, to successfully reach the learning outcomes and to be involved in a positive experience. They described APE as giving all students the possibility to benefit from the physical and social aspects of PE in a mainstream environment. As literature shows, the main aim of APE is to facilitate participation of SEN students with their peers and in age-appropriate activities (Block & Obrusnikova, 2007). According to Winnick and Porretta, (2017), APE provides personal development, emotional and social benefits to SEN students. This leads to producing physically educated persons who follow an active lifestyle. It gives equal opportunities to students with SEN to attain the same benefits, reach the same levels of achievement and participate in PE in the LRE.

Despite this, all the participants are not aware of any PE models such as AIM, STEP, TREE and TIME/S. Half of them argued that they do not believe that such models actually assist PE teachers in implementing APE. They maintained that models and literature are not helpful when dealing with SEN students as *"the class is the reality where one has to adapt, assess and modify"*. They explained that models still need to be adapted for students in class as they *"might not work for every student with SEN"*.

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### 5.3. PE teachers' competence and confidence

Only one participant has been provided with adequate training on how to adapt PE. The majority of the participants feel that the training provided by the University of Malta was either not useful or not enough. In addition, all PE teachers agreed that University had not prepared them enough to implement APE and that more training should be given. Pursuant to my findings, many educators *"feel in particular need of training"* when teaching students with SEN (Male, 2011, p. 186). In line with my findings, physical educators do not feel that they are professionally prepared to adequately cater for SEN students (Wang et al., 2015). Further studies show that their professional preparation was not adequate to prepare them in including students with SEN into general PE settings (Lijuan et al., 2015). Florian and Rouse (2009) believe that *"The task of initial teacher education is to prepare people to enter a profession which accepts individual and collective responsibility for improving the learning and participation of all children"* (p. 596). This research study affirms the statement of Davis (2009), that PE teachers often have the responsibility to implement APE, often with limited or no training. Vickerman (2007) strongly argues that PE teachers should feel confident and competent in creating opportunities for SEN students to be successful. According to the majority of the participants in this study, knowledge and proper training are the most crucial aspects to educate individuals with diverse needs and to help them be successful. Others strongly feel that training and years of experience are crucial to feel competent in adapting PE. Lieberman et al. (2002), conclude that deficient preparation is the most common problem for physical educators to effectively include SEN students in PE. Vickerman (2007) and Vidal (2017) agree that besides training, hands on experience is equally important.

Despite the lack of training, the majority of the respondents claimed that they still feel confident teaching SEN students, adapting PE to different needs and progressing activities to their abilities. Findings show that the experience gained throughout their teaching career has enhanced their confidence in adapting PE. This is consistent to Liu et al.'s (2019) study, as experience helps teachers increase their levels of confidence. Conforming to Davis, (2009), PE teachers' willingness to adapt PE is affected by the prior experience with SEN students. Additionally, half of the PE teachers admitted that experience was the only source that has provided them with knowledge on APE and how to deal with SEN students. This

mirrored the same concept mentioned by Micallef (2018), as even if some had study units at University introducing them to SEN students, it was their experience that enabled them to learn how to adapt and include them in mainstream lessons. In compliance with my findings, Micallef (2018) remarked that experience is what has been most helpful to PE teachers when getting to know students and their needs. Affirming this, PE teachers' competence and confidence improve with experience (Farrugia and D'Amato, 2009).

However, despite that experience has enhanced PE teachers' confidence in adapting PE, the majority of the participants described their experience with SEN students as *"a real challenge"*. Only two of them described their experience as either neutral or positive. In assent with Vidal (2017), the majority of PE teachers also view teaching SEN students as a challenge. In addition, despite that one of the PE teachers feels confident in adapting PE, the latter still prefers not teaching SEN students. Also, two participants feel insecure when teaching SEN students and are only confident with adapting PE to students with mild disabilities. This confirms that negative attitudes towards SEN students still exist (Wilson & Scior, 2015). Also, PE teachers in this study are not confident in adapting PE to students with severe disabilities. This is in conformity to Obrusnikova (2008) where teachers lack in confidence in adapting the curriculum for students with severe disabilities. When the number of students in class is high, or when there are severe disabilities, the participants view SEN students as an obstacle. In fact, Campbell et al. (2003) argue that most teachers are only in favour of catering for SEN students with mild physical disabilities. Adding to this, Abela Craus and Bugeja (2013) assert that the level of challenge has to do with the severity of the students' disabilities. Additionally, half of the participants admitted that students with severe disabilities affect their teaching as they participate and engage less. PE teachers in this study described that such students affect how the lesson runs, progresses and how they provide attention. Proportionate to Liu et al. (2019), teachers considered students with mild disabilities as not being obstructive to their lessons. However, half of the participants do not see SEN students as affecting their teaching in any way and rather see them as an opportunity. This is so as SEN students are included, their participation level is quite high and lessons progress smoothly.

Support provided by the SLT, other teachers, LSEs, the INCO, Head of Department and school nurse, further enhances PE teachers' confidence in adapting PE. Half of the physical educators are provided with the support required to effectively implement APE while the other half are barely provided with any information by the school. The SLT provides support in buying resources, in providing feedback and by listening to their concerns. Information about the students' abilities and conditions is primarily given by the SLT during a meeting at the beginning of the scholastic year and LSEs are also present. According to Morley et al. (2005), support from the leadership team is crucial to effectively include SEN students. However, the other half of the participants receive minimal support from the SLT and information about the students' abilities is provided by the INCO, LSEs and other teachers, including physical educators. Teachers share their experiences, ideas and ways of dealing with particular students. The majority of the participants only receive verbal feedback about the students' needs and abilities. According to Slee (2008), failing to provide appropriate support could lead mainstream schools to be obstructive rather than supportive of vulnerable students.

Half of the participants are also supported by LSEs when adapting PE as they get all the information about SEN students from them, being the most knowledgeable ones in this regard. Despite that the other half of the PE teachers expressed that they get the least support from LSEs, two of them only find great support from LSEs who are sport oriented. They describe them as taking the role of an assistant teacher, by explaining and providing feedback. They argued that such LSEs are very much useful when teaching SEN students. However, despite this, the majority of the PE teachers hardly discuss the provision of appropriate support or plan activities suited for SEN students with LSEs. In fact, the majority of the participants only discuss IEPs and any problems SEN students encounter during PE lessons, very briefly at the beginning of lessons. For others, the only collaboration that takes place with the LSEs is at the beginning of the year when resources and schemes of work are shared. Only two participants carry out appropriate collaboration with the LSEs, by sharing useful ideas and creating specific outcomes. In line with Vidal (2017), despite that PE teachers are aware of the important support LSEs offer during PE lessons, half of them replied that communication and collaboration is lacking.

In light of the findings, it is rather surprising that the majority of the PE teachers are supported by schools when they ask for additional PE equipment or resources to implement APE. The majority of them also have enough PE equipment which allows them to adapt for different needs. Only one participant stressed that the school lacks in PE equipment and is reluctant to allocate funds. Affirming this, Farrugia and D'Amato (2009) stated that more than half of the respondents are satisfied with the equipment at school. Contrarily, Micallef (2018) argues that schools provide minimal support regarding resources for students with SEN. Similarly, Vidal (2017) revealed that PE teachers find it difficult to obtain PE equipment. Despite this, the majority of the participants stressed that schools do not have specialised PE equipment for SEN students. Only two teachers coming from Independent and Church schools mentioned that they have play rooms with specialised equipment for SEN students. These findings are in line with Micallef, (2018), as no multisensory or resource rooms are available for SEN students in State schools. Thus, proportionate to Farrugia and D'Amato (2009), specialised PE equipment for physically impaired students is not available. Similarly, Ridgers et al. (2012) remarked that no specialised equipment has ever been handed to educators. Contrarily, specialised equipment in United Kingdom schools is available (Morley, et al., 2005). As literature shows, teachers need to be equipped with the necessary resources to implement diverse methods of teaching to cater for different abilities (Rose & Meyer, 2002).

Despite the lack of resources mentioned by one of the participants, and the lack of specialised PE equipment claimed by all participants, none of them mentioned equipment as a barrier when adapting PE. This is inconsistent to Mamo (2008), as despite that major adaptations have been planned, students with SEN are still not able to participate due to limited equipment. Also, according to Bekele (2017), the participation of SEN students depends on the availability of adapted PE equipment and that physical educators consider the lack of specialised PE equipment as the number one barrier hindering their participation. Contrastingly, findings in this study show that PE teachers are both confident and competent when it comes to adapting the equipment available to suit the needs of SEN students.

#### **5.4. Challenges when adapting PE**

The majority of the participants find it challenging to come up with suitable activities and exercises that SEN students can participate in. Adapting PE well to the needs of SEN students is stressful as they have to modify every activity to ensure that all students are being catered for. This is featured in Bekele's (2017) study as the difficulty of activity selection is one of the main challenges identified. In addition, some find it challenging to include SEN students in game situations and feel that they can only participate in small related games by introducing rules. Other teachers find it difficult to include and motivate students with SEN to participate in individual activities describing them as much more engaged in pairs or in groups. This is also evident in Vidal (2017) where students with and without SEN integrate and work really well together. Similarly, Farrugia and D'Amato (2009) and Barry-Power (2010) claim that students without SEN readily integrate and help students with SEN. However, this is not always the case. In fact, one of the participants finds it challenging to adapt PE to CCP classes where all students with SEN within that particular year group are present with non-SEN students who are low achievers but are generally very competitive in PE. It is really challenging for this teacher to find activities that all students can participate in together, as the able students do not accept to carry out PE with SEN students. This is so as the non-SEN students are reluctant to participate in competitive games with the SEN students. Literature reveals that students without a disability may lose interest if students with a disability are competing (Morley et al., 2005). This is therefore contrary to Liu et al. (2019) as students in mainstream lower classes are more likely to accept SEN students.

PE teachers find it challenging to provide equal attention when having large classes of mixed abilities. Some are uncertain whether the attention should be directed to SEN students or to the others while some are convinced that attention should be provided to the most talented students. Similarly, Abela Craus and Bugeja (2013) mentioned that classrooms in Malta are overpopulated and all respondents agreed that classes should be smaller to benefit students as regards attention. Half of the participants provide more attention to SEN students as they spend more time explaining, motivating and providing feedback when compared to the other students. One of them specified that adapting PE requires more effort, time and energy. The concept of extra effort when planning for SEN students is also evident in



Farrugia and D'Amato (2009). Another PE teacher feels that "*special attention*" is given to SEN students when asking LSEs to keep the students with SEN for another PE lesson. The other half of the participants treat all students equally and do not provide any special treatment except when adapting PE to their needs.

The lack of information and preparation is a challenge mentioned by almost all the PE teachers. They feel that they should be more informed about students with SEN in their classes. In fact, their greatest challenge is to seek information about SEN students, to get to know every individual and to discover their abilities, as there "*isn't one recipe which works wonders for each student with SEN*" (Sean). Similarly, Bekele (2017) identified the difficulty of identifying the needs of SEN students as a challenge. It is also difficult for the participants to enhance SEN students' capabilities when they lack the information, knowledge and abilities to plan APE lessons targeting their full potential. This shows that PE teachers lack the knowledge of effective practices and strategies. This challenge is also identified in Lavay et al. (2010) as the lack of current research related to practices leads teachers to feel incompetent. In this study, participants not only lack information about students with SEN but also lack clear guidelines and policies on integrating SEN students in mainstream PE lessons. In fact, ineffective policies for schools are a remarkable challenge for teachers to cater for all needs (Charema, 2007). Liu et al. (2019), feel that policies provide a direction to physical educators to cater for all students' needs which is crucial for the success of APE (Liu et al., 2019).

As reported by Kowalski et al. (2006), despite that PE must also be addressed in the IEP, physical educators are often left out from this process. This statement is also supported throughout the data. A challenge that the majority of the PE teachers come across is that they are not included in IEP meetings. In fact, they have never attended one throughout their teaching career. Only one participant mentioned that PE teachers are included in IEP meetings. This confirms that most schools fail in addressing the PE needs of SEN students during IEP processes (Block et al., 2011). This lack of involvement of PE teachers in IEPs has also been observed by Farrugia and D'Amato (2009) who argue that IEPs are still in their infancy in Malta. Abela Craus and Bugeja (2013) also stated that only a small minority of PE teachers are involved in IEP meetings. Participants in this study commented that the SLT,

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LSEs, the form or class teachers and parents of the student are involved in IEP meetings. However, only the form or class teachers who happen to be free are able to attend IEP meetings. Due to the lack of involvement of PE teachers in IEP meetings, the majority of the participants feel that the PE section in the IEP report neglects important information about the child's abilities in PE. Befitting with Abela Craus and Bugeja (2013), PE is the least mentioned during IEP meetings. In addition, Columna et al. (2010) stated that numerous schools fail to provide detailed information about the child's abilities in PE. Conforming to Mamo (2008), PE teachers are not even asked to make suggestions to be included in students' IEP. In addition, two PE teachers argued that not only are they not allowed to be present in IEP meetings, but are also not allowed to access IEP reports or to even have copies if them.

All participants in this study agree that PE teachers should be present during IEP meetings to provide their feedback, to set realistic goals and encourage them further. Chaapel et al. (2012) argue that by attending IEP meetings, PE teachers do not only contribute in writing the learning outcomes and goals but also meet the parents of SEN students. According to Lieberman and Houston-Wilson (2011), the IEP can be an excellent communication tool between teachers and parents to exchange information about effective strategies and to collaborate together by identifying goals and objectives for the child. Results in Chaapel et al's. (2012) study show that effective information provided by parents can be used as strategies by teachers. Therefore, when PE teachers are absent from IEP meetings, collaborative work with parents and quality instruction are compromised (Chaapel et al., 2012). Clearly, PE teachers in local schools are denied this opportunity. Also, Mamo (2008) commented that schools should ensure that all stakeholders are involved with IEP reports as it would affect its implementation. However, participants argued that although it would be a great idea to include all teachers in IEP meetings, it cannot be logistically done. As an alternative to this, participants claimed that during IEP meetings, teachers and LSEs could bring forward suggestions previously discussed with PE teachers. One of the participants questioned why PE teachers are not asked to use their expertise during IEP meetings when it is beneficial for students. This suggestion was also mentioned by one of the participants in Mamo's (2008) findings.

The majority of the PE teachers find it challenging to adapt PE to suit the needs of students with physical disabilities and describe them as being the most challenging. This finding is in conformity with Farrugia and D'Amato (2009) and is further confirmed by Micallef (2018), where most participants regard physical disabilities as limitations during PE lessons. Contrastingly, Vidal (2017) argues that students with behavioural disabilities are much more challenging. This is so as participants in this study feel that the training received was not adequate in preparing them to deal with physically impaired students. This is also in line with Farrugia and D'Amato (2009) and Morley et al. (2005). A participant finds it challenging to adapt PE to wheelchair bound students due to lack of appropriate facilities while another one finds it really challenging to convince students with severe disabilities not to be involved in PE due to severe medical conditions. Similarly, a study conducted by Farrugia and D'Amato (2009) show that 46.6% of the PE teachers find barriers to accessibility when teaching physically impaired students. Participants in Desira's (2002) study also consider the facilities at school as not suitable to cater for the physically impaired.

The greatest challenge half of the participants find is that some LSEs are not prepared to participate in PE lessons and view PE lessons as a break. Despite that the disability of students might be a physical one, some LSEs are sometimes not present during PE lessons. Also, half of the participants do not find any cooperation from LSEs who are not sports oriented. This concept is also present in Mamo (2008) as LSEs are either not knowledgeable in PE or not committed enough. This is also in line with Farrugia and D'Amato's (2009) study as only one LSE participated actively during all the observed PE lessons. This lack of collaboration between educators and LSEs is also found in UK schools. Kay (2005) argued that when teachers and LSEs lack in support, collaboration and communication, participation of SEN students is threatened. The lack of cooperation from parents of SEN students is also a challenge encountered by one of the participants. This is so as some parents believe that their child with SEN will not be able to succeed in PE while others emphasize that their child should take part in all physical activities at school. Columna et al. (2008) suggest that PE teachers should be aware of the expectations of parents for effective adaptations to take place. Chaapel et al. (2012) argued that when it comes to PE, parents may have different priorities for their children.

### **5.5. Effective practices and strategies in APE implementation**

A strategy that the majority of the participants find effective is to gain as much information and knowledge as possible about SEN students as this assists them in adapting PE. Half of the PE teachers ask the SLT for further information while others ask other teachers. In severe cases, one of the PE teachers discusses with the INCO while another one involves the Special Olympics. Two participants acquire more information by carrying out their own research. Some participants keep in contact with the parents of students with SEN as this is the best way to gain information. Baglieri and Shapiro (2012) emphasise the significance of constructing relationships between schools and parents. Literature shows that establishing a strong communication between parents and teachers is beneficial for students' learning (Cox, 2005).

When planning lessons and schemes of work, half of the participants consider the different needs in class, some also referring to the students' IEP. They find this to be effective to ensure that lessons are being catered for all needs. However, half of the PE teachers do not consider the different abilities of students in class when planning. As attested by Bekele (2017), most PE teachers do not design adapted activities by considering the level of difficulties that SEN students have. This is so as these would have already been planned prior to the scholastic year. Rather than considering the different needs in class, a practice that some of the participants find effective is planning for variations and progressions, which are found to be enough to adapt for all needs. However, other PE teachers do not find planning for adaptations effective as they should rather be identified during the lessons. This is because what would have been planned, might not work for SEN students and further adaptations would still be required. They added that knowing the students, their abilities and the lesson content, enable them to adapt to different needs during the lesson. According to the observations carried out by Mamo (2008), SEN students were not fully included during PE lessons as only slight adaptations were carried out and which were not thoroughly planned.

In addition, almost all PE teachers do not create individual educational yearly programmes with separate targets for SEN students but rather use the existing scheme of work. Only one PE teacher ensures to create an individual programme when having a difficult case. Instead, a practice they find effective is to set targets from one lesson to the next according to students' needs. A small number of participants only set different goals for individual sports as they feel that SEN students are able to take part with the other students in team sports. In fact, when catering for all students in mixed ability classes, a practice that most of the participants find effective is to provide the same activities for everyone and then offer different ones depending on their abilities. They explained that while SEN students should be offered the same opportunities, they should also be provided with adapted activities so as to develop particular skills and to experience activities where they succeed. On the other hand, a practice that two participants find effective is to offer different opportunities, goals and targets to SEN students while focusing on the same activity and learning outcomes. Moreover, the domains that PE teachers find mostly effective to implement when adapting PE are the physical and social domains. All the participants rarely plan for the cognitive domain when adapting PE as the activity might already be physically challenging for SEN students. The teaching styles that the participants find mostly effective when adapting PE are the student-centred approach and a mixture of all teaching styles. Other participants discussed that experimental learning, collision teaching, encouragement and communication are important teaching styles when adapting PE.

Participants use different strategies to encourage interaction with SEN students. One of them allows certain behaviour from SEN students such as hugging and high five which help in building a good relationship. Another participant believes that highlighting SEN students as different or excluding them due to their disability, hinders interactions. Another teacher focuses on delivering particular instructions so as not to exclude any students. Another participant feels that building good relationships with SEN students involves interdisciplinary skills, especially when they do not want to take part in PE lessons. Contrarily, another PE teacher chooses to be understanding by adapting to their needs with the help of the LSE. A practice that another PE teacher finds effective is reaching an agreement with SEN students, that if they participate in PE lessons, they will use their favourite equipment.

An effective practice that half of the PE teachers find effective when providing instructions is combining visuals and auditory instructions. They make sure that all students are able to see the demonstrations and hear the instructions easily while ensuring to position themselves in front of students who might have hearing impairments. This also proved to be effective in Timura (2017). They make use of repetition to ensure that SEN students have grasped the instructions provided. Repetition is also a practice identified by PE teachers in Timura (2017). Adaptations such as demonstrations and repetitions are effective with students with cognitive disabilities (Lee et al., 2007). A strategy that one of the interviewed participants finds effective is asking SEN students to demonstrate to the rest of the class. This allows SEN students to understand better and the teacher to adapt the activity immediately if it is too difficult. In fact, peer modelling is also a practice mentioned in Timura (2017), Zammit (2012) and also in literature which proves to keep all students active during lessons (U.S Department of Education, 2011). Another strategy that a respondent finds effective is providing individual group explanations after all students have been assigned in groups.

Three of the PE teachers mentioned that if SEN students do not need to be supported by an LSE and are able to cope and to participate with the other students during PE lessons, a strategy which they find effective is asking LSEs not to be present. They choose to take full responsibility of SEN students to enhance their independence. However, another teacher prefers to have the LSE present to watch over students with SEN even if they are able to cope on their own. In fact, observations carried out by Mamo (2008) show that SEN students seemed happier when participating with their peers rather than with LSEs. Participants in Farrugia and D'Amato's (2009) study also stated that students with SEN should be given the chance to carry out some activities without the help of LSEs in order to enhance independence and self-esteem. Bartolo and Sultana (2002) mentioned that becoming independent trains SEN students to face challenges in their everyday lives. In line with this, a practice that half of the PE teachers find effective is dividing all students into groups. This leads SEN students to feel included and learn how to work with their peers. In addition, all PE teachers seemed apprehensive that an effective way of grouping SEN students is according to their abilities. Also, according to half of the participants, assigning a play buddy with SEN students is an effective strategy as well as assigning roles to different students such

as leaders and followers. According to Maggin et al. (2011), if teachers do not provide opportunities for students to experience independence and success, they will be less likely to take up such opportunities in the future.

A practice that two PE teachers find effective is to adapt PE lessons through differentiated learning by using different equipment and different activities. When catering for all students in mixed ability classes, most of the participants find it effective to provide the same activities for everyone and then offer different ones depending on their abilities. They explained that while SEN students should be offered the same opportunities, they should also be provided with adapted activities so as to develop particular skills and to experience activities where they succeed. On the other hand, a practice that two participants find effective is to offer different opportunities, goals and targets to SEN students while focusing on the same activity and learning outcomes. Consequently, an effective strategy used by another teacher is the rotation system. This allows the teacher to prepare two stations, one with a low net and another one with a higher net in volleyball. Similarly, Garrahy (2015) recommended organising activities into a station format, where students work on individual goals and at the same time participate in the same lesson. Another strategy that another participant finds effective when teaching skills is providing progressions and regressions variations. They explained that they provide soft balls in Basketball, larger balls when focusing on coordination, large sized rackets and low hurdles when jumping. This shows that PE teachers unconsciously adapt PE lessons by making use of PE models such as 'AIM' and 'STEP' models. Two PE teachers find the use of videos very useful to introduce a skill or a sport to SEN students. Another two PE teachers make their own resources such as flash cards and ensure to use colourful materials and equipment. The use of visuals is believed to be good practice to instruct students who respond better to pictures rather than to written or verbal cues (Cruz, 2018; Timura, 2017).

A practice that half of the PE teachers find effective is that of creating different assessment criteria for students with severe disabilities while only adapting the existing assessment to students with mild disabilities. When creating a new assessment for SEN students with

severe disabilities, PE teachers mostly focus on the ABCs of movement to help students to enhance the fundamental movements. In a study by Lee et al. (2007), about 73% of PE teachers use modified assessment for students with disabilities. On the contrary, the other half of the participants assess all students by using the same goals, learning outcomes and assessment. However, they still remarked that they assess students with SEN differently by focusing on the achieved targets rather than the failed attempts. An effective way for PE teachers to monitor students' progress is through continuous assessment and attendance. Others monitor SEN students through the use of verbal formative feedback or peer assessment. They concluded that such monitoring checks progress and the aspects they need to work on. Wilson et al. (2016) contended that assessments are pivotal in measuring students' progress according to the learning outcomes and if assessment and monitoring do not occur, teachers would not know their progress. Also, without any records, physical educators are unable to plan goals for specific needs.

## **5.6. Conclusion**

In view of the literature, this chapter discussed the findings of the study. Results clearly conveyed the PE teachers' perception with regards to APE. It is clear that all PE teachers involved in this study are aware of APE which gives access to quality PE to all students by providing adaptations suited to their conditions and abilities. Despite this, participants are not familiar with PE models and do not believe that such models assist in adapting PE. Additionally, despite not being provided with adequate training to implement APE, the majority still feel confident and competent in implementing APE. This is so as experience was the only source that provided them with competent knowledge. However, the greatest challenges that PE teachers face are adapting PE to students with physical impairments, the lack of information about students with SEN in their class, the lack of involvement in IEP meetings and reports, the lack of knowledge in finding suitable activities for SEN students and the lack of cooperation from LSEs. The effective practices and strategies that PE teachers find mostly effective when implementing APE are related to how they prepare themselves when teaching SEN students, how they adapt PE in mixed ability classes and the factors they consider when planning. The most effective domains and teaching styles, the



strategies to build good relationships and the practices for instructions were also discussed. Finally, grouping strategies, differentiated learning and assessment were also presented. The next chapter outlines the conclusions and proposes recommendations for further studies.

## CHAPTER 6

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# **CONCLUSIONS & RECOMMENDATIONS**

### **6.1. Introduction**

This chapter recapitulates the main findings and draws out some recommendations and suggestions for further studies. Additionally, strengths and limitations unfolded throughout the research study are also brought out.

### **6.2. Key findings of the study**

The study emphasized the perception and attitude of physical educators on APE and their impact on students. It also focused on the implementation of APE across both primary and secondary levels and within the state, independent and church sectors. Findings relate to PE teachers' confidence and competence, the challenges they encounter and the strategies and practices they find mostly effective when implementing APE.

Participants strongly value APE and are quite familiar with its purpose. They described it as an opportunity for all students with different abilities to achieve the same or similar goals at their own capabilities and in different processes, which are specific to their needs. However, participants are not aware of any PE models such as AIM, STEP, TREE and TIME/S that assist them in implementing APE. Besides, they do not believe that models can help in adapting PE to SEN students. They strongly believe that strategies and practices should not be based on models, but should rather be based on realities in class. Another emergent concept was that the majority of the PE teachers have not been provided with adequate training. All participants agreed that the University of Malta had not prepared them enough to implement APE and that more training should have been given. An interesting finding is that despite this lack of training, the majority of the respondents still feel confident teaching SEN students, to adapt to different needs and to progress activities to their abilities. Results show that the experience they have gained throughout their teaching career has enhanced their confidence in adapting PE. This is so as experience was the only source that led them to be knowledgeable about APE. Despite this, the majority of the PE teachers still described their experience with SEN students as a challenge and half of them admitted that they affect their teaching. However, the majority of the PE teachers do not feel competent in adapting PE to

students with severe impairments due to lack of training. The greatest challenges that PE teachers are faced with are adapting PE to students with physical impairments, the lack of information about students with SEN in their classes, the lack of involvement in IEP meetings and reports, the lack of knowledge in finding suitable activities for SEN students and the lack of cooperation from LSEs. Findings show that these challenges are mainly encountered due to the lack of support from schools when accessing information about SEN students and the lack of training and knowledge on adapting PE to severe disabilities.

Results exhibit that the strategies and practices PE teachers find mostly effective are acquiring as much information and knowledge as possible about SEN students in their classes and providing the same opportunity for everyone and then offering different ones depending on their abilities. Other effective practices are to plan for variations and progressions, to create an individual programme with separate targets for students with severe disabilities and to focus on implementing the social and physical domains while eliminating the cognitive domain. Effective strategies are building a good relationship with SEN students, combining visual with auditory instructions, asking SEN students to demonstrate to the rest of the class, grouping students according to ability, assigning a play buddy with SEN students, asking LSEs not to be present for PE lessons if students are able to cope with their peers, differentiating activities and equipment and creating a different assessment for SEN students with severe disabilities and modifying it for students with mild disabilities.

### **6.3. Recommendations**

As a result of the findings, recommendations are being put forward for PE teachers who are the practitioners in the field and for LSEs who are mostly involved with SEN students and who have an indispensable role during PE lessons. Recommendations are also directed to the SLT, parents, policy makers and the official education authorities who indirectly effect the planning and implementation of APE.

**6.3.1. For PE teachers**

- Results show that PE teachers are not informed about PE models and do not see them as beneficial in APE implementation. PE teachers should be knowledgeable about PE models and should view them as enhancing their teaching when implementing APE.
- If PE teachers feel that they lack in competence to adapt PE for particular needs, one should not be reluctant to ask for support such as from the SLT and the INCO.
- Findings show that the majority of the PE teachers do not discuss or plan lessons with LSEs. PE teachers should collaborate and communicate well with the LSEs by sharing and creating activities together that mostly target the SEN students' full potential.
- Apart from adapting PE, PE teachers' responsibility should also be to enhance SEN students' independence and self-esteem by providing opportunities where they carry out activities without the help of LSEs. This trains SEN students to face challenges in their everyday lives.

**6.3.2. For LSEs**

- Together with PE teachers, LSEs should discuss the provision of appropriate support and ideas on how to implement APE for particular students with SEN.
- LSEs should be well prepared for PE lessons, by collaborating effectively with PE teachers.
- LSEs should be encouraged to accompany and assist the SEN students under their responsibility.

**6.3.3. For the Senior Leadership Team (SLT)**

- One of the challenges that the majority of the participants are faced with is the lack of information about SEN students in their classes and the lack of accessibility to IEP reports. The SLT should be more approachable so as to provide PE teachers with more information about SEN students. The SLT should also organise a meeting at the beginning of the scholastic year, to share information about SEN students among all teachers.
- Results show that the majority of the PE teachers are unable to attend IEP meetings due to having lessons at the same time when IEP meetings take place. The SLT should set up

IEP meetings when at least one PE teacher is available. In addition, results display that some teachers are unable to access the IEP reports or to have a copy of where information about PE is concerned. Providing a copy of the IEP to PE teachers, where PE is concerned, should be made obligatory by schools. Results also exhibit that IEP reports lack useful information, where PE is concerned. The PE section of the IEP reports should be built by the PE teacher, LSE, student and the parents concerned.

- The SLT should ensure that SEN students are all supported by an LSE during PE lessons.
- Findings show that when the number of students in a class are high and where SEN student are also present, PE teachers view SEN students as an obstacle to the class. The number of students in a class, where SEN students are present, should be downsized. By adopting this measure, PE teachers are more likely to increase their attention to SEN students and are more likely to feel confident in class.
- A challenge that some PE teacher encounter is that facilities at school are not suitable for particular needs. Administrations should stand as advocates for SEN students' rights.
- All schools should have an open school policy. Participants in this study find the open door policy effective in order to acquire more information about SEN students from parents.

#### **6.3.4. For the Parents**

- If parents notice that the participation of their child with SEN is compromised in PE due to lack of suitable facilities, parents should put an emphasis on the Director of Education and clarify that their child with SEN should be more involved. The Director of Education has the capability to shift SEN students to another school which might be more accessible to them.
- Before the commencement of the scholastic year, parents should be in contact with the school to share information about their children with SEN and their abilities and limitations to help PE teachers to acquire further information.
- Parents should ask for PE teachers to be available in IEP meetings.

### **6.3.5. For the Policy Makers**

- A challenge that one of the PE teachers finds is the lack of clear policies and guidelines on how to include SEN students in a PE setting. Policy makers should keep in mind that PE should also be addressed when it comes to providing policies on how to cater for all needs. Policy makers should also offer support to teachers.

### **6.3.6. For the Official Education Authorities**

- Results show that the majority of the schools do not have any specialised PE equipment. The Education Authorities should provide annual funds for specialised equipment and where funds might be limited, the state should make use of European Union funds.
- Findings display that PE teachers lack the competence in adapting PE to severe disabilities due to lack of training. The state should fund professionals such as INCOs to help PE teachers in widening their knowledge on how to cater for students with severe disabilities. In fact, one of the participants finds a great support from the INCO when it comes to dealing with SEN students with severe disabilities.
- Half of the PE teachers lack the support from LSEs. The state should allocate funds to provide professional training on how LSEs can support SEN students during PE lessons. This measure should help LSEs to provide a more professional input during PE lessons.
- Some PE teachers argued that some facilities at school are still either not accessible for particular needs or not suitable. The state should ensure that a Disability Needs Assessment is conducted in all schools. If schools are less modern, the refurbishment needs should be outlined.
- The state should encourage and provide information to parents on how to register their children for the Special Olympics.

## **6.4. Strengths of the study**

An essential key point of this research is the depth of data that was acquired through the use of interviews. The study was built around the understanding of participants on a social matter and it prompted them to delve deeper into the discussion. Also, with the use of

interviews that spanned over the course of around one hour, the study was made rich in content. Additionally, the guided interview protocol, where a semi-structured process took place, enabled for unintended factors to come out.

The study deals with sensitive issues regarding the educational entitlement of SEN students. The fact that participants were chosen through convenience sampling and that I knew some of the participants quite well, they felt more confident in expressing their honest opinions and this led to achieving more authentic results. This was indeed required as there is a great difference in what one says and one actually carries out. Also, despite that the researcher had known the selected participants from previous coaching courses and from being a student at IPES, the selection was based on the school sector and level. In addition, an email was sent to twelve PE teachers; two PE teachers from each sector and level. This allowed the researcher to select participants as randomly as possible. The researcher identified that the results were not to be any different if another method of sampling such as purposive sampling was to be used. This is so as the high probability was that the same PE teachers were to be used for the study, with the only difference would have been that of gaining permission from the principals and head of schools.

Another strength is that the study allowed the researcher to identify the physical educators' perception about various notions, including their opinions about teaching SEN students in mainstream classrooms, APE, PE models, their confidence and competence, challenges and strategies and practices they find mostly effective. The pilot study executed at the beginning of the study, allowed the researcher to revise and adjust particular questions which were ambiguous for the participants or which the researcher felt that further in depth information was required. Additional questions suggested by the participants were also included within the interview protocol. This allowed the researcher to acquire valuable opinions about the implementation of APE, through having a wider picture on various aspects and beliefs. These strong elements made this study relevant and current and also have the ability to trigger and generate further research, discussion and action on the matter.



### **6.5. Limitations of the study**

This study cannot be taken as a representation of the whole schooling population in the Maltese Islands due to the use of convenience sampling and due to the lack of participants. It would have been more authentic and effective to utilise a larger sample but due to time constraints, this was not possible. Another limitation was that due to the COVID-19 pandemic, amendments to the data collection methods had to be carried out. By giving educators the opportunity to implement PE models during their PE lessons, by reflecting through a process of writing a diary and by discussing the outcomes and challenges while implementing PE models during a focus group together with all participants participating in this study, would have allowed me to analyse a greater amount of in-depth data. This would also have served as a continuous professional development for PE teachers where personal experiences, challenges, effective practices and strategies would have been shared between them. Unfortunately enough, this was not possible due to the pandemic.

### **6.6. Suggestions for future research**

Throughout the study, different concepts were debated by participants which brought across different ideas for further research studies. These include the following:

- a) Exploring the LSEs' perceptions, challenges and roles in adapting PE.
- b) Analysing how physical educators can better support parents having children with SEN.
- c) Determining the reasons why PE teachers are including or not including parental expectations and interests in PE and what can be done to further promote parental involvement in PE.
- d) Examining the vision and perception of students with SEN in APE.
- e) Exploring the differences between how PE teachers express their beliefs on APE in contrast with how they adapt and implement it in practice through observations.
- f) Identifying how technology can be used to enhance students' participation in APE.

### **6.7. Final conclusion**

This research has explored the in-depth perceptions of physical educators concerning the concept of APE. The introduction of inclusion within the local educational system has led educators to deal with a variety of abilities and needs within mainstream classrooms. It is the responsibility of PE teachers to implement adaptations, practices and strategies that cater for all abilities and to fully develop the potential of all students in class. Therefore, it is crucial to identify the PE teachers' challenges, competence and confidence in implementing APE in order to identify ways how educators can be supported throughout the planning and implementation of APE. As a result of this study, I conclude that there should be a greater focus on APE within schools and that one should focus on identifying practices and strategies for its implementation. This should be considered as indispensable in our educational system as it will lead the way towards a successful educational path for SEN students.

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# **APPENDICIES**

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# **APPENDIX 1**

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## **Information Letter to Physical Education Teachers**

Dear Sir/Madam,

My name is Melanie Grech and I am a student at the University of Malta, presently reading for a Masters in Teaching and Learning in Physical Education. As part of my studies, I am conducting a research study, titled: *“Catering for all students through Adapted Physical Education”*, under the supervision of Ms. Lara Tonna Grima. This letter is an invitation to participate in this study. Below you will find information about the study and about what your involvement would entail, should you decide to take part.

**Purpose of study:** To investigate and gain an understanding on the Physical Educators’ perceptions and their competence in implementing adapted Physical Education lessons to cater for all students in the classroom. By participating in this study, PE can contribute in enhancing knowledge to this issue as well as being a learning experience for you to enhance your practice.

**Methods of data collection:** Should you choose to take part, you will be asked to participate in a semi-structured, one- to- one interview which will be done remotely via Skype at a time and date convenient to you. The interview will take approximately 45 to 1 hour and will be audio-recorded.

**Data protection:** You will not be asked for any personal data and your identity will be kept confidential. Also, any data collected from this research will be used solely for purposes of this study and will be treated confidentially. Your participation is completely voluntary and you are free to accept or refuse to participate, without needing to give a reason. You are also free to withdraw from the study or refuse to answer particular questions at any time, without needing to provide any explanation and without any negative repercussions for you.

If you choose to participate, please note that your participation does not entail any known or anticipated risks. Please note also that, as a participant, you have the right under the General Data Protection Regulation (GDPR) and national legislation to access, rectify and

where applicable ask for the data concerning you to be erased. All data collected will be immediately erased on completion of the study.

A copy of this information sheet is being provided for you to keep and for future reference. You will also be given a consent form to sign. This will be returned to me by email where possible. If this is not possible, the consent form can be returned to me by mail.

Thank you for your time and consideration. Should you have any questions or concerns, please do not hesitate to contact me by e-mail: [melanie.grech.16@um.edu.mt](mailto:melanie.grech.16@um.edu.mt) or over the phone: . You can also contact my supervisor, Ms. Lara Tonna Grima via email:  or over the phone: .

Sincerely,

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*Melanie Grech*

Melanie Grech

Ms. Lara Tonna Grima

# **APPENDIX 2**

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## **Consent Form for Physical Education Teachers**

### ***Catering for all students through Adapted Physical Education***

I, the undersigned, give my consent to take part in the study conducted by Melanie Grech. This consent form specifies the terms of my participation in this research study.

I have read and understood the information about my participation in the explained study and have had the opportunity to clarify any queries:

1. I am free to accept to participate, or to refuse or stop participation at any time without giving any reason and without any penalty. I may choose to decline to answer any questions.
2. I understand that I have been invited to participate in a semi-structured one-to-one interview which will be done remotely via Skype and will be audio-recorded. The researcher will investigate my perceptions and competence in implementing adapted Physical Education lessons to cater for all students in the classroom.
3. I am aware that the interview will take approximately 45 minutes to 1 hour. I understand that the interview is to be conducted at a time and date that is convenient for me.
4. I understand that my participation does not entail any known or anticipated risks.
5. I understand that by participating in this study, PE can contribute in enhancing knowledge to this issue as well as being a learning experience for me to enhance my practice.
6. I understand that, under the General Data Protection Regulation (GDPR) and national legislation, I have the right to access, rectify, and where applicable, ask for the data concerning me to be erased.
7. I understand that I will retain a signed copy of this consent form for my records.

**I agree to take part in an audio recorded interview conducted via Skype for the purposes of this study.**

Name of participant: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

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Melanie Grech

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Ms. Lara Tonna Grima

# **APPENDIX 3**

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## Interview Guide

### **SECTION 1: GENERAL INFORMATION**

1. Number of years teaching: \_\_\_\_\_
2. Sector: State School  Church School  Independent School
3. Level: Primary  Secondary

### **SECTION 2: INTRODUCTION**

#### **PART A**

4. What inspired you to pursue this line of career?
5. How do you feel about teaching Physical Education (PE) presently?
6. What is your teaching philosophy?

#### **PART B**

7. Are all types of disabilities accepted in your school?
  - a. If not, what disabilities are accepted in your school?
  - b. If not, why not?
8. In what classes are Special Educational Needs (SEN) students normally found?
  - a. Is there any kind of classification adopted in your school? If yes, is the same type of classification applied to SEN?



**SECTION 3: PE TEACHER'S EXPERIENCE & ATTITUDES TOWARDS SEN STUDENTS**

9. 1994 saw the first students with disability included in mainstream classrooms. What is your opinion about inclusive education?
- a. Do you agree or disagree with inclusion? Why?
  - b. Do you think that mainstream schools help SEN students to participate during a mainstream PE lesson?
  - c. Has your attitude towards the concept of inclusion changed over time?
    - i. If so, how?
10. According to you, what rights should SEN students have during PE lessons?
11. According to you, what could be modified in PE to make the subject more inclusive and enhance the participation of SEN students?
- a. Do you think there should be different goals/learning outcomes for SEN in PE?
    - i. If yes, in what ways?
12. In your opinion, what should be done in schools to increase the percentage of participation of SEN students in PE?
13. Have you ever taught students with disabilities?
- a. If yes, what kind of disabilities?
  - b. What can you tell about your experience with students with disabilities along the years of your teaching career?
  - c. What can you say about your relationship with students having learning difficulties or special needs?
14. What level of information are you aware about when having students with disabilities in your class?
- a. By whom is this information provided?

- b. Do you take any actions when knowing you are going to have a student with disabilities in class?

15. Are PE teachers included in students' IEP meetings?

- a. If no, do you at have access to the student's IEP?
- b. If no, do you believe that it is beneficial for PE teachers to be part of the IEP team?
  - i. Why?
- c. Is there something you would change in the IEP meetings?
  - i. If so, what are the changes?

#### **SECTION 4: PE TEACHER'S PERCEPTION AND KNOWLEDGE ABOUT ADAPTED PE**

16. What do you understand by Adapted Physical Education?

- a. Do you think that we should offer the same opportunities to everyone regardless of his/her abilities or do you think that offering different opportunities depending on the abilities or needs of a person makes more sense?
  - i. Why do you think so?
- b. In your opinion, what is the purpose of APE?

17. What factors do you think affect the PE teachers' attitude towards implementing APE?

18. Are you aware of any APE models?

- a. If so, which one or ones?
- b. How did you become aware of these models?

19. Have you ever heard about AIM, STEP, TREE and the TIME/S models?

- i. Do you make use or have you ever used any of these models?
- ii. If yes, how was your experience?
- iii. If not, why not?

**SECTION 5: COMPETENCE & CONFIDENCE IN ADAPTING AND IMPLEMENTING ADAPTED PE**

20. Describe the level of participation and engagement that SEN experience during your PE lessons?

- a. Are they isolated or included by their non-SEN peers?
- b. What do you see as your role or/and responsibility to the students with disabilities in your classroom?

21. Are you confident with having SEN students in a class?

- a. Does having a SEN student in class affect your teaching in anyway? If yes, how?

22. Is it difficult to come up with lessons that SEN students could participate in?

- a. Is it stressful to know that you have to plan extra resources? How?

23. Were you provided with training on how to adapt PE in order to include and cater for all students? Or did you learn by experience?

- i. If yes, what kind of training was provided to you? Do you think that this was enough?
- ii. Do you feel that training should be given to PE teachers? If yes, what kind of training should be given?
- iii. Do you feel that University has prepared you in planning adapted PE to SEN students?

24. Do you feel that teachers have the support, resources and time to effectively implement adapted PE?

- i. What support and resources would be beneficial?

25. Do you think that all PE teachers should be flexible to adapt PE for all abilities?

- a. Do you think that specialised APE teachers should be introduced in schools in Malta?

26. In your opinion, what qualities should teachers have to be able to adapt PE?

**SECTION 6: PE TEACHERS' CHALLENGES & BARRIERS WHEN ADAPTING PE LESSONS**

27. What do you see as your greatest challenges as a teacher in including SEN students through adapted PE?
28. Do you see SEN students as an obstacle to the class or as an opportunity?
- a. Why? Why not?
29. Are the school facilities for PE lessons accessible for students who have a disability?
30. Does the school provide specialised PE equipment for SEN students?
31. Does the school have any policies with regards to students with special needs?
- a. Are these policies implemented by all the educators?
32. Do you feel that the school provides enough support for you to be able to create an inclusive environment in a PE lesson?
- a. What type of support do you receive when dealing with SEN students?
    - i. From which stakeholder do you find most support? And least support?
  - b. What are the roles of the Learning Support Educators (LSEs) while you are carrying out a PE lesson?
    - i. What do you expect from LSEs during PE?
    - ii. Do LSEs assist the SEN students during PE lessons, or do they just sit at the side or even do not come with the students for the PE lessons?
    - iii. Do you discuss the provision of appropriate support, as well as plan the appropriate activities suited for the student, with the LSEs?
  - c. Are opportunities created where educators share resources and experiences of teaching to learn new ways about how best to respond to learners' needs?

**SECTION 7: EFFECTIVE STRATEGIES & PRACTICES IN ADAPTING PE**

33. When reflecting about your PE lessons, do you think that SEN students are given the same opportunities during your lessons as those who are not SEN?
- a. If yes, how do you manage to include them?
  - b. If no, why not? What do you think you can do to include them?
  - c. How do you normally deal with students with special needs during a PE lesson?
34. Research shows that teaching styles affects students with disabilities being included into the general education classroom.
- a. What, in your opinion, are the most effective teaching styles in dealing with students with disabilities?
35. Do you plan your lesson in any particular way when having a SEN student in class?
- a. How? Do you take into consideration the:
    - i. SEN of the particular student when preparing the lessons?
    - ii. IEP of the particular student when preparing the lessons?
    - iii. Statement of needs when preparing the lessons?
  - b. Do you create an individual educational yearly programme with separate targets for SEN students?
    - i. If yes, how? If no, why not?
  - c. Do you set different goals from those of the rest of the class?
    - i. How?
  - d. Do you create different assessment criteria for SEN?
    - i. If yes, how?
    - ii. If no, why not?
36. What kinds of adjustments do you do during the delivery of your lessons to meet the needs of all students in the classroom?
- a. Do you make any changes to the exercises to be specifically fit for the SEN individual?

- i. In what ways?
  - b. Do you have particular strategies to further encourage interaction with SEN students?
    - i. What are they?
    - ii. Do you aid SEN students to interact with others?
    - iii. How?
  - c. Do you give them special attention?
    - i. How?
  - d. Do you use additional materials during your lessons to adapt PE?
    - i. What?
37. Which domain/s do you focus on mostly when planning and carrying out your lessons?
- i. Why?
38. Do you monitor the participation of the student?
- a. How?
39. According to your opinion, what are the benefits that APE offers to SEN students?

## **SECTION 8: CONCLUSION**

40. What advice would you give to general education teachers critical of or apprehensive about teaching students having different abilities in mainstream classes?
41. Would you like to share any other experiences or do you have any other comments you would like to add?