Thesis submitted in fulfilment of the requirements for the degree of Doctor of Education

Perspectives of Physical Education student engagement in an experientially based Inclusion and Diversity Physical Activity unit

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Abstract

It is widely accepted by today's Australian society that education, in particular, be inclusive and accessible for all students. Teachers regularly report a perceived limit to their skills set in relation to working with students with a disability, particularly when the students are in a mainstream setting. This perception has also been identified within cohorts of physical education (PE) teachers with many reporting they do not feel confident to teach students with a disability in a physical activity setting. Research has shown that PE teachers often feel underprepared to work with students with a disability, particularly in PE classes where activities may need to be modified or adapted for full participation (Forlin & Chambers, 2011; Barber, 2018).

The purpose of this study, adopting a phenomenological approach, was to demonstrate the importance of undergraduate tertiary PE students participating in an inclusion and diversity or Adapted PE program, and to understand the value of that experience. The mixed methods research methodology with a focus on phenomenology was developed using a triangulation methodology that used three phases of research to produce data that would address a set of sub-aims relating to the undergraduate PE student experience and the perspectives of experts regarding inclusive practices.

Phase 1 of the research involved surveying undergraduate PE students participating in an Inclusion and Diversity in Physical Activity unit in an inner-city university in the west of Melbourne, Australia using the Physical Educators' Attitude Towards Teaching Individuals with a Disability (*PEATID-11*) questionnaire pre and post-completion of the Inclusion and Diversity in Physical Activity unit. As a questionnaire was used, a positivist paradigm was adopted for this quantitative phase. One hundred and twenty two responses were collected and of that, 29 were completed both pre and post-completion of the unit. Results indicated that

there were significant differences to the attitudes of the undergraduate PE students' pre and post the unit, which is supported by previous research findings using this instrument. The *PEATID-11* data results found students showed positive changes in their attitudes and behaviours after completing the unit, as they scored higher in the post-mean scores in each category of the questionnaire indicating a more positive intent post-completion of the unit and demonstrating the importance of the inclusion of the unit in the undergraduate PE degree. A prediction that therefore can be made is that undergraduate PE students, who have specific, focused Adapted PE training, as a part of their undergraduate PE studies, will have a more favourable attitude towards inclusion and working with students with a disability.

Phase 2 of the research utilised focus groups with the same undergraduate PE student cohort using a phenomenological lens to capture their 'lived experience' of participating in the Inclusion and Diversity in Physical Activity unit. Three focus groups, with a total of 22 undergraduate PE students were conducted with students post the completion of the unit. This approach has provided a data that describes the students' experiences and learnings in their own voices that has not been a feature of earlier quantitative studies. The research has provided an additional perspective to the current body of knowledge in the research conducted around the impact of Adapted PE courses on the attitudes, confidence and skill set of undergraduate PE students and has identified keys trends, themes and issues in relation to the experiences and learnings of students engaged in the Inclusion and Diversity in Physical Activity unit at Victoria University. Results of this phase of the research showed that the undergraduate PE students did report the value the experience and found it to be 'life changing' and useful.

The third phase of the research involved the completion of 8 individual interviews with industry education experts in the field of PE and inclusion. This last phase of the research was designed to investigate in what way how inclusion teacher training was viewed and how important it was considered to be by experts in the field. Findings of this stage of the research

overwhelmingly support the inclusion of Adapted PE, inclusion and diversity training in undergraduate PE degrees. This was evidenced by more favourable attitudes towards working with students with a disability at the completion of an inclusive PE unit and positive responses to focus group questions on the impact of the inclusive PE unit.

The three phases of the research support the importance of including an inclusive PE program in an undergraduate PE degree. This research supports the literature that clearly demonstrates that preservice and undergraduate teachers who have had experience in an Adapted Physical Education unit as part of their studies, which included theory and practice, could make a difference to the predisposition of their preparedness to be more inclusive. (Hodge et al., 2002). Additionally, this research adds to the body of knowledge in providing undergraduate PE student voices together with expert educators' voices regarding the importance of 'hands on inclusive learning'. The findings that detail more favourable attitudes post-completion of the inclusive PE unit in association with the positive 'lived experience' data, prompted the recommendations of including mandated inclusive education and training for physical education teachers (both undergraduate and practicing) and the requirement of inclusive practice training being provided within an experiential context. It is anticipated that the findings of this research will serve as evidence to support the development of undergraduate PE courses and foster further research in regards to inclusive education and training for physical educators.

Student Declaration

I, Loretta Konjarski, declare that the Doctor of Education thesis entitled 'Perspectives on Physical Education student engagement in an experientially based Inclusion and Diversity Physical Activity unit', is no more than 60,000 words including quotes and exclusive of tables, figures, appendices, bibliography, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

I have conducted my research in alignment with the Australian Code for the Responsible Conduct of Research and Victoria University's Higher Degree by Research Policy and Procedures.

Signature  Date May 25, 2021

Dedication and Acknowledgements

To my supervisors, Professor Anthony Watt and Associate Professor Janet Young; a most sincere and heartfelt thank you for believing in me when I did not believe in myself. Thank you for the professionalism and friendship you gave me throughout this process, I cannot thank you both enough.

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This thesis is also dedicated to all the people who had the little voice inside their head saying they couldn't do it.

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List of Abbreviations

AITSL	Australian Institute for Teaching and School Leadership
PE	Physical Education
PEATID	Physical Educators' Attitude Towards Teaching Individuals with a Disability
PIL	Practice Integrated Learning
SDB	Social Desirability Bias
SPSS	Statistical Package for the Social Sciences
TPB	Theory of Planned Behaviour
VIT	Victorian Institute of Teaching
UN	United Nations
UNCRPD	United Nations Convention on the Rights of Persons with Disabilities
WHO	World Health Organization

Chapter 1: Introduction

Australian society considers that education will provide equal, accessible and inclusive education for all students. Many teachers, however, feel ill-equipped to challenge and work with students with disabilities, particularly when the students are in a mainstream setting. Physical Education (PE) teachers are no different. PE teachers also often feel underprepared to work with students with a disability, particularly in PE classes where activities may need to be modified or adapted for full participation. It is accepted that teachers who have had some practical experience with students with a disability during their undergraduate studies have a better approach to inclusion and feel more prepared to be able to provide inclusive programs (Case et al., 2020; Tindall et al., 2015; Hodge & Jansma, 2000).

While studies, both Australian (Martin & Kudlacek, 2010; Pedersen et al., 2014) and international (Case et al., 2020; Tindall et al., 2015), have indicated the need for inclusive studies or Adapted PE units as important, not all Australian universities require that their students undertake a unit in 'adapted education' or 'inclusive PE' and many PE courses do not have an 'adapted' unit. In fact, the Victorian Institute of Teaching, while being quite prescriptive on the requirements of PE courses in Victoria, does not mention Adapted PE or have any mention of inclusion and diversity as being mandatory (Victorian Institute of Teaching, 2015). The National Professional Standards for Teachers only mentions the word disability six times in a large document in Standard 1 – Know Students and how they learn, and this is generic to the profession and discipline based (AITSL, 2011). Focus area 1.6 in the AITSL document – Strategies to support full participation of students with a disability – has four categories from graduate teacher to lead teacher with broad statements around teaching strategies and knowledge to support students with a disability. It is then up to the individual university to plan a course that may or may not include an inclusive practice unit or has inclusive practices embedded across the curriculum.

While this is an important inclusion in the AITSL National Professional Standards for Teachers, it must be understood in its context for PE teachers or other specialist areas where a support aide may or may not be present. It is imperative for students with a disability to be fully included in PE and physical activity classes, and that their teachers are confident, motivated, knowledgeable and skilled in inclusive practices for a student to reach their full potential (Hodge et al., 2002; Pedersen et al., 2014).

This research will examine, through rich, lived experience data combined with robust questionnaire data, the notion that experiential engagement with students with a disability in a PE setting will result in helping to develop undergraduate PE students who understand inclusion and are more prepared to be inclusive in their practices. This research will add a personal voice to the experiences of the undergraduate PE students, and detail in their own words, what they learned and how they perceived themselves to have grown and changed as a result of their engagement, supported by growth and change captured in the quantitative data results. Additionally, this research will be supported by interviews with 'expert' teachers and academics in relation to their personal experiences. As much of the research to date has been quantitative in nature, this approach will fill a gap in the literature by providing qualitative data to enhance the findings of the quantitative data results.

This research will provide a thorough overview of the undergraduate PE student experience with both qualitative and quantitative data compared to the views of 'expert' practitioners in the field of inclusion. The three phases of the data will then be compared and contrasted to examine and further explore the benefits of participating in an inclusive undergraduate unit with experiential learning opportunities. With this understanding this research will create an awareness of the importance of an inclusion unit in an undergraduate degree for undergraduate PE teachers and the need for ongoing training in this area.

Chapter 2 is a literature review that delves into the broad definitions of inclusion and the concept of how inclusive practices in PE and sport fit into our current social model of disability. This chapter examines the research that has been published around inclusive practices in PE and sport and teacher training in particular PE teacher training. The literature review takes an international and national perspective on prior studies that have used the Physical Educators' Attitude Towards Teaching Individuals with a Disability (*PEATID-11*) questionnaire. This questionnaire will be used to determine undergraduate PE teacher attitudes and intentions that are working with students with a disability in a PE setting. The previously conducted research that used this questionnaire has detailed many findings around confidence and motivation pre and post-completion of an inclusion unit. Further to this, a consideration of research articles that have reflected inclusive practices in PE and sport at the tertiary level will also be conducted. A search to discover research that was conducted to determine the 'lived experiences' of undergraduate PE students working with students with a disability to compare and contrast against the findings of this research will also be performed. The literature review demonstrates the understanding of the current research in relation to inclusion in PE, sport and teacher and coach training. The findings of the literature review has informed the design of the three phases of this study and has guided and informed the recommendations that will be detailed in Chapter 7 with all phases of the research complete.

Chapter 3 details the study design and the rationale and purpose of the study. It describes the triangulated approach and mixed methods used to capture both quantitative and qualitative data. This chapter will give the reader a clear understanding of the purpose of each phase of the research and how each phase relates to the overall research question through the sub-aims. A clear diagram will be provided to demonstrate how each phase of the research links to the sub-aims and overall research question.

The fourth chapter will address the first of the sub-aims: *To consider the students' experiences while engaging in the Inclusion and Diversity in Physical Activity unit and if they changed their perceptions of people with disabilities or working with people with a disability*. This phase of the research will use the *PEATID-11* questionnaire pre and post-completion of the Inclusion and Diversity in Physical Activity unit. This phase of the research will measure student beliefs and attitudes towards students with a disability pre and post-completion of the unit. In the discussion of the data it was evident that a positive change had occurred, a result that was consistent with other Australian and international studies. This was an important finding as highlighted the importance of this type of unit in supporting the inclusion of students with a disability in PE classes in the future.

Chapter 5 addresses Sub-aim 2: *To explore how students have grown and changed as a result of participating in the Inclusion and Diversity in Physical Activity unit*, and Sub-aim 3: *To consider the 'lived experience' of students' engagement with the Inclusion and Diversity in Physical Activity unit*. This phase of the research involved a series of three student focus groups that explored and examined the undergraduate PE students' 'lived experience' of participating in the Inclusion and Diversity in Physical Activity unit. The qualitative data were captured and recorded and then thematically analysed and found five prominent themes: improved knowledge of inclusion and diversity; personal growth as a facilitator or professional; perceived teaching competence; anxiety; and self-efficacy. These themes were compared and contrasted to similar studies and were found to demonstrate the importance of a unit such as this to be included in undergraduate PE teaching and coaching in order to provide students with the confidence and skills to work inclusively with students with a disability in a physical activity setting. Undergraduate PE students were able to articulate the importance of the practical 'hands on' experiences and the better understanding of disability in the PE and coaching practical classes. Undergraduate PE students also indicated that they had better skills,

motivation and confidence to be inclusive of these students and provide better outcomes for those students. For the purpose of this research the operational definition for confidence will be described as being sure of your abilities and belief in oneself (Benabou and Tirole, 2002).

In the sixth chapter, Sub-aim 4 of the research: *To explore what teachers, academics and experts in the field of inclusion in education and sport perceive of the importance for a unit such as this to be included in undergraduate teacher education or training of coaches* was addressed. This third phase of the research was a series of eight individual interviews with teachers, academics and experts in the field of inclusion in education and sport. This qualitative data were collected and thematically analysed to discover five themes: inadequate training opportunities, mandated and compulsory units and accreditation, training based on classroom experiences or self-managed upskilling, pursuing professional development and capacity building for a more inclusive society. It was found that all 'experts' indicated that they felt there was a need for more quality training in the area of inclusion in physical activity. The data also showed that the 'experts' felt that there is a need for mandated training at the undergraduate level and a need for continuing professional development to improve capacity building of PE teachers in order to provide an inclusive space for all students to participate fully. Very little research has been done in this particular space and the results of this set of studies will contribute to the body of knowledge in this area and provide some recommendations for the future.

Chapter 7 brings all three phases of the research together to address the overall research question and sub-aims. In this chapter the three phases of the research and their findings are examined in relation to the overarching research aim: 'To examine the undergraduate Physical Education student learnings through engaging in the Inclusion and Diversity in Physical Activity unit.' The findings of all three studies together with the importance and significance of this research will be detailed and any practical and theoretical implications will be discussed.

Through the course of this research the premise was to discover the 'lived experience' of students participating in an inclusion and diversity unit, what changes had occurred in relation to attitude, skills, knowledge and motivation for working with students with a disability and the opinions, thoughts and considerations of 'experts' in relation to their own undergraduate and working life practices. A thoughtful examination of the findings shows there is much work to be done to fully support the development of competent and skilled undergraduate PE teacher and coaches and there are gaps in the current system that can be addressed to ultimately give teachers a better opportunity, through improving capability to provide more inclusive opportunities for students. This chapter will also provide for recommendations for further theoretical research and practice. Limitations will be explored and considered in light of the research aim, sub-aims and design.

The conclusion will detail that this research is able to show that there is scope for positive change and that inclusive practices, skills and knowledge can be taught and provide our PE undergraduate students, PE teachers and coaches with the skills and confidence to be more inclusive. What is clear is that more can be done in this space to educate undergraduate PE students and newly graduated teachers and coaches in relation to skills, knowledge, motivation and confidence to include students with a disability fully in physical activity opportunities.

Chapter 2: Literature review

Introduction to the Literature Review

In 2006 the United Nations (UN) Convention on the Rights of Persons with Disabilities (UNCRPD) was published and was consequently signed by 182 countries, including Australia, where this research is being conducted. The UNCRPD adopts a social model of disability where the rights of the person with a disability are front and centre. This follows decades of work by the UN to begin the process of how people with a disability are treated, their rights and the approaches we take to interact with people with a disability. Additionally in 2016, the UN published a companion document that included an authoritative definition of inclusion which this research will use to define inclusion:

> Inclusion involves a process of systemic reform embodying changes and modifications in content, teaching methods, approaches, structures and strategies in education to overcome barriers with a vision serving to provide all students of the relevant age range with an equitable and participatory learning experience and environment that best corresponds to their requirements and preferences. (UN 2016, 4)

Providing an inclusive, safe physical education setting for students with a disability by educating and training PE undergraduates and sports coaches is the motivation for this study. Inclusion in education supports the goal of social inclusion for all (Antoninis et al., 2020). There is more to inclusive education than simply placing students with a disability in a mainstream educational setting. While there is an understanding that to achieve an inclusive society there must be access to inclusive education, there is less of an understanding of what it is to be truly inclusive within an educational setting (Antoninis et al., 2020). Coaches were included in this research in line with a study by Koh (2014) who indicated through values training research with PE teachers and coaches that PE teachers often had the role of PE

teacher, coach, coach educator, administrator and in some cases athlete. The finding of the research can therefore be used to improve coaches' approach to inclusive PE and sport practices.

The area that this research will be focused on is PE undergraduate student attitudes pre and post completion of an Adapted PE unit, and the effect this has on willingness, confidence and ability to work with students with a disability. Additionally, there will be an examination of the literature in regards to the student voice and lived experiences of students who have engaged in an Inclusion and Diversity in Physical Activity unit and an investigation into reflections of educational experts in regards to the importance of such a unit being included in undergraduate training. For the purpose of this research, attitudes will be defined as a conscious or unconscious mental state, values, feelings and belief and an inclination to a certain action or belief (Altmann, 2008).

Reviewing the literature will give a basis for which to compare and contrast what research has been done, what research and practice is being done and give scope to suggest what could, and should be done to foster student PE teachers or favourable attitudes toward working with students with a disability. The review of literature will also give an understanding of how disability and inclusion is viewed by society and how this has changed over the years.

Disability

The World Health Organisation (WHO) defines disability as "the interaction between individuals with a health condition (e.g. Cerebral Palsy, Down Syndrome and Depression) and personal and environmental factors (e.g. negative attitudes, inaccessible transportation and public buildings, and limited social supports)" (WHO, 2021). The (WHO) estimates that approximately 15% of the global population, or over one billion people experience some type

of disability (WHO, 2021). The WHO also states that disability is a global public health issue; a human rights issue and a development priority (WHO, 2021).

This definition highlights the need for society to recognise and improve access for people with a disability to be included. The shift from a medical model of disability to a social model of disability has been evolving over recent years. The medical model sees any functional limitations, as treatable, preventable and as a medical phenomenon (Riddle, 2013). In the medical model there is a clear focus on what the individual is not able to do. The social model of disability takes a very different view of disability, and challenges society to eliminate barriers such as geographical, legal, political and social barriers, that may prevent individuals from being truly included (Riddle, 2013). As Oliver (1990) suggests,

> It is not individual limitations, of whatever kind, which are the cause of the problem, but society's failure to provide appropriate services and adequately ensure the needs of disabled people are fully taken into account in its social organization
>
> (Oliver, 1990, p. 2)

The shift to define what disability is a challenge worldwide. The WHO reports that even in the reporting of COVID-related health issues, disability as a cohort was often left out of the data collection (WHO, 2021). In June 2019, the United Nations Disability Inclusion Strategy was released to "promote sustainable and transformative progress on disability inclusion through all the pillars of the work of the United Nations" (WHO, 2021). This strategy has been designed to assist countries to ensure that disability is seen as a public health factor and in included in countries' health agendas.

In 2018 in Australia, where this research is being conducted, there were 4.4 million Australians with a disability (ABS, 2018). Of that number, there were 7.7% or 357,500 of Australian school aged children in 2018, who were affected by a disability (ABS, 2018). Of those Australian

children who identified as having a disability, 101,900 were diagnosed with Autism. Most of these children on the autism spectrum were attending school, with 40.8% attending a special school or a special class in a mainstream school. 92.3% of children on the autism spectrum indicated that they had experienced some form of educational restriction including, fitting in socially (59.8%), learning difficulties (55.3%) and communication difficulties (51.5%) (ABS, 2018).

The manner in which society has considered disability has changed over the years and views on disability have progressed from exclusion and segregation to more inclusive practices. Schools, teachers and coaches have also had to be a part of this change from medical to social models of thinking about disability. The social versus medical model of disability will be examined further in the literature review. Where previously a student with a disability did not attend a mainstream school, and did not participate fully in PE classes and sports, now they do. This has consequences for schools, teachers and the students. In turn, this also must have an effect on how we prepared PE teachers and coaches to be more inclusive in their classes.

The discourse around disability and inclusion

The discourse around disability has changed over the years. Jenson (2018) argues that the social model theories underpin philosophy around inclusive education. While in the medical model, disability is seen as something that restricts people in the workplace and community, it also is seen as something of a disadvantage to that person. The medical model sees the disability as something not normal and something that needs to be cured or 'fixed' (Haegele & Hodge, 2016; Jenson, 2018). On the other hand, the social model of disability is something quite different and views disability, and people with a disability, as people first beyond their disability. The social model of disability reflects on the way society interacts with people with a disability and that society should be looking for ways to include people with a disability into schools,

communities and society (Haegele & Hodge, 2016). To this end, the social model of disability supports the notion of inclusion. It is important for the inclusive nature of the social model of disability to be reflected in the units that are undertaken by undergraduate PE students so that current issues relating to inclusion and disability are seen as important factors.

While schools grapple with what it means to fully understand what it means to be inclusive and to understand its complexities, some of the concerns stem from how they put concepts into practice (Dyal et al., 1996). Schools want to become more inclusive and are using evidence, where possible to guide their practices (Azorín & Ainscow, 2020). Lindemann et al. (2017) would argue that society too, has difficulty in trying to understand disability as a social and communicative construct, and that there is a still a great deal of learning and understanding to be had before we have a truly inclusive society.

While disability has often been seen as the problem of the individual, we are now moving to understand that the problem is more to do with how society interacts with the person with a disability (Goodley et al., 2017). Disability has been viewed as a deficiency on the part of the person with a disability, and in some cases, as per the moral model of disability, has been considered as a sin on the part of the person with a disability (Andrews, 2017). These models of thinking towards disability still exist today in some form or another across the world and it is through education that we can challenge some of these norms of thinking.

The medical model of disability is still very prevalent in our society and the influence of this is seen in our schools and our society (Baglieri, 2017). Seeing people with a disability as people who need to be ‘fixed’ or that they are ‘broken’ with the emphasis on curing the person with a disability is still some of the thinking norms (Baglieri, 2017). To have this belief and the placing a child into a school that has not truly embraced what inclusion is may not have the result of true inclusion. Therefore the importance of educative programs about disability and inclusion are critical to education reform.

Defining Inclusion

Defining both inclusion and diversity is paramount to understanding the context through which the literature has been viewed. Diversity is the "inclusion of individuals representing more than one national origin, color, religion, socioeconomic stratum, sexual orientation, etc" (Dictionary, 2021). Diversity is anything that can be used to differentiate people and groups from one another. Wellner (2000) proposed that diversity can encompass both similarities and differences between people, including but not only characteristics such as, age, race, religion, disability, ethnicity, sexual orientation and religion.

Diversity is not only what a person is, but also what they bring with them, for example, perspectives, experiences, life styles and cultures. Diversity is the acknowledgement of all people and a celebration of difference. To be truly inclusive, we must embrace diversity and appreciate difference. Understanding diversity in society is important for our society to be inclusive and this applies to schools and sports as well. While disability is a part of a diverse population, it is often thought that diversity only relates to culture, religion, sexual orientation, gender and race. It is only recently that diversity has come to embrace disability.

Inclusion is defined as the "… act of including someone or something as a part of a group, list, etc, or a person or thing that is included and the idea that everyone should be able to use the same facilities, take part in the same activities and enjoy the same experiences including people who have a disability or other disadvantage" (Dictionary, 2021). It is pertinent to examine the word 'inclusion'. While inclusion should relate to all forms of minority groups and their activities in mainstream life, it is very often used to describe the notion of including disability. For the purpose of this study, the word 'inclusion' will relate to students with a disability and acknowledge that gender, sex, religion, race and culture, and other forms of diversity should also be considered for an activity to be truly inclusive.

Disability and Schools

Baglieri (2017) describes the word inclusion in relation to schools as "practices that integrate students with and without disabilities in general education" (Baglieri, 2017, p. 4). This suggests that barriers for all children in schools should be considered and schools should be working towards a more inclusive approach for all students. Baglieri (2017) believes that for students to be included, schools must examine their facilities, environment and practices to ensure that all children can be prioritized.

In a study by Hemmingsson et al. (2007) it was found that students with a disability attending mainstream schools in Canada, Sweden, Ireland and Britain all reported inadequate opportunities and many barriers when attending mainstream schools. Many of those children were then moved to special schools to access programs with fewer barriers to inclusion and greater cooperation by the teachers (Hemmingsson et al., 2007). Some of the reported benefits to moving to a special schools were less discrimination and greater inclusion, barrier-free environment and specialist resources and greater support (Shah, 2007). Australia in fact had a shift towards students moving to special schools for many of the same reasons (AIHW, 2017).

There has been a suggestion that while special schools will provide excellent opportunities for students with a disability to improve their educational opportunities, there is a need for those students to have access to the common culture of childhood (Shah, 2007). Mulderij (1996) argues that the skills developed during time at a mainstream schools will prepare a student with a disability for life as an adult.

The argument over whether a student with a disability should attend a special school or mainstream school is one that is both emotional and complex, as parents, teachers and students grapple with the best way forward. What is clear is that whatever school a student with a disability is attending, they should have access to the same opportunities both educational and

social that non-disabled students have. Laws and policies have been changed and schools are slowly embracing the notion of diversity in their classrooms and of including all students. It is important to note that in Australia many inclusion policies are not law as in countries such as the USA (Lindsay, 2004). However, despite this, educational institutions are making progress towards inclusion and inclusive practices in their schools.

The Disability Discrimination Act (1992) in Australia has a number of legal categories where it is illegal to discriminate against people with a disability such as; disability discrimination, indirect disability discrimination and education (Government, 2018). The Disability Standards in Education (2005) was developed to further extend the details regarding students with a disability in education and their associated rights. These standards were reviewed again in 2012 and 14 recommendations were made to address any issues. These documents have been underpinning the importance and supporting the need for inclusive education in Australia.

There are however, a number of teachers who work in mainstream schools and are teaching students with a disability. In research by Lindsay (2004) a teacher in the study implied that if they had wanted to work with students with a disability then they would have completed a special education course. In some cases there is a perceived frustration by some teachers by having students with a disability in their classes (Lindsay, 2004). This is not the opinion of all teachers, but can be seen as an issue for teachers who are working with students with a disability if they feel unprepared for this. Forlin et al. (2008) suggests, in multiple studies of teachers working with students with a disability in mainstream settings, that it is the teacher, not policies that are paramount to inclusion and that inclusive training, thus far, for teachers has not been adequate.

Disability and Physical Education

There has been a trend towards including students with a disability in general PE classes in recent times (DePauw & Doll-Tepper, 2000). Importantly, one of the most cited benefits of such inclusion is the social benefits, along with the benefits of physical activity for the students with a disability (Place & Hodge, 2001). Additionally benefits such as behavioural modelling, increased self-esteem and improved learning for students with a disability has also been found when students with a disability are in an inclusive educational environment (Vickerman & Coates, 2009).

Drawing upon the research by Forlin et al. (2008) one of the considerations in inclusion in PE is the training of PE teachers and the attitudes towards working with students with a disability. While teachers, including PE teachers, can show both favourable and non-favourable attitudes towards working with students with a disability, the literature indicates that with training and education, teachers can develop more favourable attitudes and better skills and knowledge (Combs et al., 2010; Haegele & Hodge, 2016). Hodge et al. (2004) found in their research study that for PE teachers to effectively instruct and teach inclusively they need more training and support. This is supported by research by Rizzo and W. P. Vispoel (1992) that found that beliefs and attitudes of undergraduate or preservice teachers, towards people with a disability can be changed through coursework and practice.

Hodge et al. (2004) found that physical educator's beliefs and behaviours towards inclusion and working with students with a disability, are often quite positive and reported as 'favourable'. Rizzo and Vispoel (1992) also found that "there is a direct relationship between teacher attitudes towards teaching students with a disability and the general acceptance level of a student with a disability in the classroom" (p.56). This is important when trying to achieve an inclusive environment in the classroom. If the teacher is more prepared to be inclusive and

believes it can be achieved, then the level to which the student with a disability is accepted becomes more positive.

Inclusion in Physical Education and Physical Activity

Inclusion in education, particularly PE, is a challenging and an ever changing environment. Across the world, there has been a slow change from excluding those with a disability, to embracing the idea of an inclusive school and inclusive education. While organisations such as schools, governments and councils attempt to embrace the notion of inclusion, the language of disability still prevails. The problem with that is students with a disability "tend to be evaluated on their label or categorical membership, rather than on individual characteristics" (Tripp & Rizzo, 2006, p. 310). For the purpose of this research, the word inclusion will relate to the inclusion of students with a disability, although it is acknowledged that inclusion, in the true sense of word, will also include people with diverse needs from a range of situations for example, gender, sex, race, religion, to name a few.

Inclusion in a PE setting can be defined as including students with a disability in a mainstream PE setting along with students who do not have a disability (Rizzo et al., 1994; Sang Soo et al., 2014). This is an important step towards breaking down barriers and perceptions of what students of all abilities can and cannot do. This approach also allows all students to have equal access to the types of education on offer, whether or not they have a disability. This integration or inclusion does have some significant benefits for both students with and without disabilities (Block & Obrusnikova, 2007).

> "Inclusion improves the social development of children with and without disabilities who are educated in inclusive classrooms, in terms of getting along with others, interacting, seeking assistance and lending assistance, moving from one context to another and asking questions." (Papadopoulou et al., 2004, p. 105)

The idea of inclusive schools is a shift from previous years. It is important to remember 'inclusion' has undergone a major shift from a 'medical model' of disability to a 'social model' of disability. Much of this process has been the language associated with the 'social model' of disability. With this in mind, this is such a large shift in thinking for many people in society, and teachers are no different. The 'medical model' of disability clearly labels people with a disability and groups them according to their disability. The downside of labelling each disability is that all people with autism were expected to behave in the same way and therefore were interacted with in the same way. It is now known that that an individual approach to each person with a disability can achieve the best outcome for the individual. It is believed that the act of labelling, "…contributes to a culture of exclusion and stigmatization, both at a policy and practice level of the educational system" (Corbett, 2001, p. 56).

Further to this, students with a disability want to be included in physical education classes (Lieberman & Houston-Wilson, 2017). Like all students, students with a disability feel upset and different when they are not included and special and normal when they are (Falvey et al., 1995). It is therefore, critical to the process of inclusion that PE teachers are prepared and able to provide such inclusive experiences for their students.

Attitudes and Beliefs of undergraduate PE teachers and coaches

The attitudes and beliefs of PE teachers and coaches have been the subject of many research studies as it has been explicitly linked to the ability of PE teachers and coaches to be inclusive (Braga et al., 2018). Researchers have found that a lack of adequate training and the resulting lack of confidence, alongside negative attitudes towards students with a disability are critical elements to be addressed for PE classes to be inclusive (Braga et al., 2018; Kozub & Lienert, 2003). Additionally, it has been found that teacher attitudes play a major role in how inclusive practices are approached in PE and sport programs (Braga et al., 2018; Kozub & Lienert, 2003).

This research has followed on from the work of Rizzo (1984) and his subsequent research with colleagues that has examined the role of attitudinal variables and the impact they have on inclusive practice.

There are several attitudinal variables that are predictors of PE teacher having more favourable attitudes towards teaching PE to students with a disability. Perceived competence of PE teachers and coaches is a strong predictor of more favourable attitudes towards students with a disability (Kowalski & Rizzo, 1996; Rizzo & Vispoel, 1991; Rizzo & Wright, 1988). Variables such as gender (Hodge & Jansma, 2000), previous experience in working with students with a disability (Folsom-Meek et al., 1999; Hodge & Jansma, 2000), quality and amount of training (Hodge & Jansma, 2000; Hutzler et al., 2005) have been examined over recent years to determine the best way to improve PE teacher attitudes towards working with students with a disability.

To understand the variables that affect attitudes towards working with students with a disability is important as it allows for institutions such as universities to explicitly and intentionally provide the appropriate knowledge, skills and experience within courses to help to create more favourable attitudes and in turn, more favourable intentions (Braga et al., 2018). Fishbein and Ajzen (1980) developed the Theory of Reasoned Action to predict behaviour. This theory has been used to explain behaviours and what contributes to the behaviours. The link between a person's attitude and how they behave is important to understand as the attitudes will determine the behaviour (Ajzen & Fishbein, 2005). Therefore if you have a negative attitude towards working with students with a disability, then you are less likely to be inclusive.

The Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB) is the theoretical framework that is based on Fishbein's Theory of Reason Action (TRA) that was designed to explain the relationship

between behaviours and attitudes (Fishbein & Ajzen, 1980). The TRA was designed to predict how a person will behave based on their behavioural beliefs and existing attitudes.

Ajzen (1991) added a third variable, control beliefs, that he felt could contribute to understanding the individual's intention to a given behaviour and this was then called the Theory of Planned Behaviour. The TPB has been used in many research studies (Hodge & Elliott, 2013; Wang et al, 2015) to assess and examine behaviour is a variety of discipline areas including the assessment of PE teachers intentions towards inclusive practices in PE and was used as a basis for the PEATID questionnaire developed by Rizzo (1984).

The TPB is essentially a theory that attempts to link beliefs to behaviours. By using a questionnaire such as the PEATID, researchers have been able to examine factors such as attitude and intention as predictors of inclusive behaviours in undergraduate and pre-service PE teachers (Kowalski & Rizzo, 1996; Oh et al., 2010; Pedersen et al., 2014; Rizzo & Vispoel, 1991). There were a number of demographic variables that Rizzo used to examine the data for example gender, years of experience, age, and severity of disability based on variables suggested by Ajzen (1991). A number of studies used the PEATID to examine the impact these variables would have in different settings, and have found that favourable attitudes can be developed by universities by providing the appropriate educational experiences and knowledge of inclusion (Rizzo & Columna, 2020).

While there has been some questioning of the use of TPB in determining the intentions and behaviours of teachers, and therefore, the use of the PEATID questionnaire, it is clear that there are many other instruments that can be used in future research as an alternative (Pedersen et al., 2014). Pedersen et al. (2014) also noted that that the TPB has been identified as having limitations and that this needs to be taken into account when interpreting the data.

By examining the variables that affect attitudes of pre-service and undergraduate PE teachers there is an opportunity to address areas such as teaching competence, confidence, skills and knowledge. Universities and other training organisations can also provide authentic learning experiences with 'hands on' activities to allow participants to gain experience in working with students with a disability in a physical activity setting to improve participants perceived competence (Block & Rizzo, 1995; Kowalski & Rizzo, 1996; Rizzo & Vispoel, 1991; Rizzo & Wright, 1988).

Undergraduate PE teachers and coaches and inclusive practices

This section of the literature review will examine research that was undertaken with PE teachers and undergraduate PE teachers' experiences and beliefs around working with students with a disability. It will examine research that has used the Physical Educators' Attitude Towards Teaching Individuals with a Disability (*PEATID -11*) questionnaire to compare and contrast studies that have also used this questionnaire. Additionally, and to supplement the data collected in a quantitative manner, this literature review will examine research that has detailed the 'lived experiences' of undergraduate PE teachers and expert educators as a means of enhancing the understanding of the changes that can occur with inclusive training and education.

Undergraduate PE teacher attitudes have been identified as a significant factor in inclusive practices in PE when working with students with a disability (Duchane et al., 2008; Ellis et al., 2012). Case et al. (2020) conducted a meta-analysis of studies that have examined the effects on student teacher attitudes and behaviours when having participated in an Adapted PE unit across the world. This literature review will focus on the findings of student questionnaire data driven research and focus group quantitative student and expert educator driven data to ascertain the main themes of student confidence, self-efficacy and attitudes in relation to

working with students with a disability. The literature review will also examine the experiences that have led to any changes prior to and post-completion of an Adapted PE or inclusion unit. As teacher effectiveness when working with students with a disability is directly related to their attitude (Duchane et al., 2008; Ellis et al., 2012) this literature review will explore this premise. While an examination of literature across the world will be included, Australian studies will be evaluated to give context in relation to this study.

Previous literature outlines that undergraduate PE teachers who have had experience in an Adapted Physical Education unit as part of their studies, which included theory and practice, could make a difference to the predisposition to their preparedness to be more inclusive (Hodge et al., 2002). The idea that structured learning activities, in a safe, controlled environment can bring about change through a positive experience is very powerful. The literature also details findings demonstrating that preservice or undergraduate teachers should plan, prepare, deliver and adapt their lessons to the needs and interests of the student cohort. A critical part of this learning process is the ability for preservice and undergraduate teachers to reflect on their experiences (Hodge et al., 2003). This premise is further enhanced by a study by (Carlson et al., 2012), which states that "teacher attitudes are central to inclusive practice" (p.8).

Further, Pedersen et al. (2014) examined academic preparation and found that, Australian preservice or undergraduate teachers with more training in the Adapted PE area had "more favourable beliefs, attitudes and intentions than the less trained cohort" (Pedersen et al., 2014, p. 8). The presumption that can be made is that preservice or undergraduate teachers, who have specific Adapted PE training, as a part of their undergraduate studies, may have a better and more positive attitude towards inclusion and working with students with a disability. A PE teacher with confidence, skills and knowledge around disability and inclusion, will be able to provide a more inclusive physical activity experience for the students with a disability and in turn, that student will have access to a the same opportunities as all other students.

Currently “there is no mandated units of work associated with Adapted PE prescribed for Australian PE teacher training in any teaching registration board guidelines” (Pedersen et al., 2014, p. 10). So, while research shows that preservice and undergraduate teachers gain invaluable experience and a much more favourable disposition to working with students with a disability, the registering body has not identified the necessity to mandate this as an essential requirement. The research that was conducted resulted in findings that were so positive that Pedersen et al. (2014) contend that “…the findings of the present study suggest that a more comprehensive pre-service PE teacher training is warranted in Australian universities” (p.10).

While Pedersen et al. (2014) were not able to find exactly what part of the Adapted PE unit contributed significantly to the changes in attitudes, the attitude changes did occur. Many variables have been identified as partial contributors for the changes in attitudes including: previous experience, prior knowledge, a positive experience, the practical nature of the unit and staff/lecturer enthusiasm. While it would be difficult to specify one variable, the overriding importance here is that a positive outcome has been achieved.

Preparing undergraduate PE students and sports coaches to be more open to the notion of inclusion, to understand what inclusion is and to be more prepared to include students with disability are the keys towards creating educational environments which allow children with a disability to thrive. The attitudes of teachers towards inclusion and diversity are critical components to the success of PE programs that cater for people with a disability, or who have come from a diverse background. It has been found that, “ …physical educators who had received academic preparation as well as practical experiences related to people with disabilities, showed more positive intentions towards teaching students with disabilities in general physical education than those, who did not receive such education or practical experience” (Tripp & Rizzo, 2006, p. 312).

Methods of measuring the impact of inclusive education upon new and established PE teachers

There has been substantial interest in the investigation of the impact of how inclusion of all students in PE classes and physical activity in recent times, as we strive to make our schools and communities more inclusive for people with a disability. Several instruments have been developed to assess how pre-service, undergraduate and in-service PE teachers attitudes towards working with students with a disability. While the instrument of choice for this research was the Physical Educators' Attitude Towards Teaching Individuals with a Disability (*PEATID -11*) questionnaire (Rizzo, 1984), it must be noted that there a number other instruments such as; the Attitudes Toward Inclusive Education Scale (ATIES) (Wilczenski, 1992), the Interaction with Persons with a Disability (IPD) (Gething, 1994), the Concerns about Inclusive Education Scale (CIES) (Shah et al., 2016) and the Sentiments, Attitudes and Concerns about Inclusive Education (SACIE) (Loreman, Sharma, Earle, & Forlin, 2007), scale, the Teacher Integration Attitudes Questionnaire (TIAQ) (Sideridis & Chandler, 1995), as examples, have also been used to investigate how pre-service and undergraduate PE teachers feel about working with students with a disability

The instruments mentioned above that have been used in research that examines the attitudes and intentions of undergraduate PE students and pre-service PE teachers towards working with students with a disability. The Attitudes Toward Inclusive Education Scale (ATIES) developed by Wilczenski (1992) uses a Likert-type classification to determine attitudes of social, physical, academic and behavioural aspects of inclusion. This questionnaire was used within previous studies to measure attitudes of PE teachers (Sharma et al., 2003; Wilczenski, 1995). The Interaction with Persons with a Disability (IPD) scale (Gething, 1994) is another instrument that has been used to measure how PE undergraduate and teachers feel about interacting with people with a disability. This instrument has been used with over 2800 pre-service and teachers

drawn from 6 universities (Sharma et al., 2008). The Concerns about Inclusive Education Scale (CIES) developed by Sharma and Desai (2002) also uses a Likert scale and was developed to measure degrees of concern when working with students with a disability. Additionally the Sentiments, Attitudes and Concerns about Inclusive Education (SACIE) Scale (Loreman et al., 2007) was an attempt to develop an instrument that created a single, brief and simple instrument to measure what were believed to be the three core values of inclusion; (a) positive attitudes towards increased inclusion of students with disabilities, (b) high sense of teaching efficacy, (c) willingness and ability to adapt one's teaching to meet the individual educational needs of students with disabilities (Martínez, 2003, p. 474). The Teacher Inclusion Attitudes Questionnaire (TIAQ) validated by Sideridis and Chandler (1997) has also been used to determine teacher attitudes and beliefs towards working with students with a disability.

Physical Educators' Attitude Towards Teaching Individuals with a Disability (*PEATID -11*) questionnaire

The current study has used the Physical Educators' Attitude Towards Teaching Individuals with a Disability (*PEATID -11*) questionnaire (Rizzo, 1984) to formulate a score for the pre and post unit comparison of attitudes and behaviours. The *PEATID-11* questionnaire was selected as it had been previously used in several Australian studies (Apache & Rizzo, 2005; Martin & Kudlacek, 2010; Oh et al., 2010; Pedersen et al., 2014; Schoffstall & Ackerman, 2007). Access to the findings of Australian studies with which to compare and contrast was deemed to be important to this research.

The *PEATID-11* questionnaire was also used in research designed to predict the intentions of pre-service and undergraduate PE teachers to include students with a disability in their classes (Kowalski & Rizzo, 1996; Oh et al., 2010; Pedersen et al., 2014; Rizzo & Vispoel, 1991). Many of these studies have manipulated some of the variables that may have influenced the findings,

for example, severity of the disability (Folsom-Meek & Rizzo, 2002; Kowalski & Rizzo, 1996; Rizzo & Kirkendall, 1995), types of practical experience (Hodge et al., 2002; Hodge & Jansma, 1999) types of academic preparation (Folsom-Meek & Rizzo, 2002) and gender (Folsom-Meek et al., 1999). All of the above mentioned studies have been conducted in international settings.

The study by Pedersen et al. (2014) was conducted in an Australian setting and investigated the intentions of pre service teachers to teach students with a disability in a PE setting. The Pedersen study compared two different cohorts (n=56) of pre-service PE teachers from different two universities that were enrolled in an introductory Adapted PE unit as part of their 3rd or 4th year of undergraduate study. While both cohorts had embedded practical experiences with students with a disability included in the unit, each of the cohorts had different content, content delivery modes, assessments and practical experiences, including the number of hours working with students with a disability. The *PEATID-11* questionnaire was conducted with both groups at the conclusion of the unit to explore any differences between the two University programs. Results of this study found that cohort that had more training in adapted PE teaching had a considerably higher score for positive attitudes and beliefs towards students with a disability than the other cohort. What was found was both cohorts displayed favourable attitudes towards students with a disability which is consistent with previous studies that have measure this factor (Kowalski & Rizzo, 1996; Rizzo & Vispoel, 1991; Rizzo, 1984), however the cohort that had a greater amount of inclusive training had a more favourable view towards working with students with a disability. One cohort also showed a higher score for behavioural beliefs and while this could be attributed to a small sample size, Pedersen inferred that this may have been caused by the more comprehensive type of inclusive practical program experienced by that cohort which may have resulted in a more favourable intentions towards working with students with a disability.

It must also be noted that Martin and Kudlacek (2010) also conducted an Australian study into the intentions of pre-service or undergraduate PE teachers to teach students with a disability. They did not use the *PEATID-11* questionnaire but rather the Attitude Towards Teaching Individuals in Physical Education – Revised (ATIPDPE-R) questionnaire also based on TPB developed in the Czech Republic. This study, comprising of 230 participants, examined the attitudes of students enrolled in a Bachelor of Physical Education and were either completing their first or final (fourth year) of their degree. This research used the Attitudes Towards Individuals with Physical Disabilities in Physical Education - Revised (ATIPDPE-R) questionnaire which was based on the Theory of Planned Behaviour (Ajzen, 1991). Results from the questionnaire were analysed using the SPSS statistical software package to determine statistical differences between students in regards to attitudes, subjective norms, perceived behavioural control and intention (Martin & Kudlacek, 2010). Results from this study showed that respondents were generally positive toward working with students with a disability, however the first year students were more positive than the fourth year students. Martin and Kudlacek (2010) suggested that this may have been because first year students were more optimistic about their inclusive teaching while the fourth year students with some experience, may have experienced working with students with a disability and understand the challenges and implication associated with this.

In the Australian study by Pedersen et al. (2014), using the *PEATID-11* questionnaire, there was a comparison made between two different cohorts of University undergraduate PE students. Both cohorts completed an inclusive PE unit of study that had some variances in the delivery, for example the number of practical hours experience and how the content was delivered. Pedersen et al. (2014) found was that both cohorts had favourable intentions towards teaching students with a disability but the cohort that had more practical experiences had more favourable beliefs, attitudes and intentions than the cohort with less training. The data results

showed the impact and value of participating in an inclusive unit, on attitudes, and favourable beliefs towards working with students with a disability, no qualitative data collected to further explore the findings. Pedersen et al. (2014) indicated that one of the limitations to the study was that no pre-test data collection occurred and did not allow for a pre-measure of attitudes and belief regarding working with students with a disability. This lack of pre-measure made it difficult to link the results to the education received by the participants to explain any differences or similarities. Additionally, Pedersen indicated that further research should be conducted to explore and understand the development of attitudes and beliefs in pre-service and undergraduate PE students.

Pedersen et al. (2014) used the *PEATID-11* questionnaire as a post completion assessment of Adapted PE units to measure intentions and beliefs. While Pedersen used the data to compare two different cohorts of University students post unit completion, other research has used the *PEATID-11* questionnaire as a pre and post-data measure of change (Kowalski & Rizzo, 1996; Rizzo & Vispoel, 1991; Rizzo, 1984). The study by (Pedersen et al., 2014) was examined carefully when considering how to research attitudes and intentions of undergraduate PE students, and to consider in what way researchers can develop method, collect and analyse data collection and present results.

The lived experiences of pre-service and undergraduate PE teachers and coaches

Much of the existing research regarding the attitudes of pre-service and undergraduate PE teachers towards people with a disability has been captured and analysed through quantitative means using questionnaires. As highlighted by Campos et al. (2015) and Block and Obrusnikova (2007) there has been a lack of qualitative research in the area of inclusion and PE. There have, however, been some studies that have used qualitative methods to explore lived experiences of PE teachers and undergraduates as detailed below.

In a study by Campos et al. (2015) semi-structured focus group interviews were used to further explore PE teacher's perceptions and challenges when working with students with a disability. In this particular study, 5 PE teachers were interviewed and a transcript taken of their responses followed by a thematic analysis of the transcripts. During analysis to further provide rigour to this method of research, participants were asked to check their responses in order to validate the capturing of their responses. This study found that there were three recurring themes of; attitudes and beliefs towards inclusion, teachers' challenges and concerns, and key factors for inclusive PE (Campos et al., 2015). The results of this study also included direct quotes from the participants to further enhance the understanding of the themes for the reader and to acknowledge the participants concerns and opinions in their own words.

Further to this, McGrath et al. (2019) also used a qualitative study to examine Irish PE teachers' experiences and attitudes towards working with students with a disability. Seven PE teachers were interviewed using semi-structured questions with the flexibility to be flexible to respondents and situations (McGrath et al., 2019). The interviews were transcribed and analysed using the qualitative data analysis software NVivo to thematically analyse the data. Findings were grouped into themes and were reported on using direct quotes from the respondents. Respondents in this study indicated that initial teacher training and ongoing professional development for teachers needed to be improved and targeted to assist PE teachers to feel more competent and confident in their teaching of students with a disability. Kamberelis and Dimitriadis (2013) indicated that focus groups allow us to delve into real world problems and allow the researchers insights that are unique and important. McGrath et al. (2019) reported that respondents were able to articulate, through their 'lived experiences', that they felt that the practical 'hands on' element of Adapted PE training is important and is lacking in both undergraduate programs and professional development for teachers once they are in schools in many instances.

In the study by Pedersen et al. (2014) it was found that the cohort of students that had a comprehensive training program showed more positive attitudes and therefore were more likely to have better intentions and behaviours towards inclusion. This type of finding is indicative that a specially designed practical component to an inclusive unit may provide better student outcomes. Further to this, Pedersen et al. (2014) also found that knowledge of disability is an enabler for more inclusive practices in PE teaching, an area that could be further explored through undergraduate PE student focus groups or expert educator interviews in future research. Rizzo and Vispoel (1992) who found that the more knowledge the pre-service or undergraduate PE students had, the more inclusive they are. Studies have suggested through the quantitative data collection that undergraduate PE students and pre-service PE teachers do benefit from participating in a 'hands on' inclusive PE unit (Oh et al., 2010; Pedersen et al., 2014; Rizzo & Vispoel, 1991; Tripp & Rizzo, 2006). With limited research completed in the area of inclusion in physical activity using qualitative research, any 'lived experience' research will support or explore further the findings quantitative data and give a deeper understanding of how an individual feels about their personal experiences and confidence.

Rischke et al. (2017) found that schools can also influence teacher attitudes towards students with a disability. In some cases, students with a disability have not been included due to institutional constraints. This may be funding, professional development or cultural constraints within the school. Furthermore in some cases, highly competitive schools may contribute towards less inclusive attitudes towards inclusion (Hutzler et al., 2019). Exploring through the 'lived experience' of expert educators can clearly provide a retrospective professional insight of their involvement in working with students with a disability in a physical activity setting.

A study by Greguol et al. (2018) found that while PE teachers generally had positive attitudes toward working with students with a disability, they also were anxious or fearful about the experience. A sample of 35 PE teachers were randomly selected and responded to the Teacher

Inclusion Attitudes Questionnaire (TIAQ). It was found that these PE teachers understood the need for inclusive practices in PE classes but also acknowledged that they were fearful that they did not have the necessary competence for inclusive practices to occur. The need to further delve into findings and results to further explore how and why PE teachers are feeling like this does lead to the need for further qualitative studies. By examining interview transcripts and analysing data, the 'lived experiences' of students and PE teachers working with students with a disability can be captured. To this end, what is lacking in this area is more research that captures and documents the 'lived experiences' of the undergraduate PE students and teachers such as that conducted by (Campos et al., 2015) where the main purpose of the research was to listen to the opinions and beliefs of PE teachers around teaching students with a disability. Campos et al. (2015) also indicated that further research is needed to understand the concerns and opinions of PE teachers in regards to inclusion in PE.

Barber (2018) indicated that inclusion in reality is complex and this is often the reason inclusion in PE is deemed too difficult. In the study by Barber (2018), 150 teacher education students participated in pre and post-focus groups, individual interviews and video reflections, after participating in a modified inclusion program (a one-day specialised inclusive program) that aimed to promote more positive attitudes towards inclusion. Features of this one day experience were; a presentation by a Paralympian, pre-readings on inclusion, participation in para-sports (for example; wheelchair basketball) interactions with able-bodied and disabled staff members and a tour of a purpose built 'Abilities Centre'. The findings of the study indicated that the teacher education students who were involved in this one-day program showed significant change in confidence, a greater understanding of what people with a disability can do and a better approach to being inclusive. PE teachers have had many concerns in regards to being inclusive and many of these stem from being underprepared. Barber (2018) has posed that with inclusive initiatives such as the one detailed above, that PE teachers can become more confident

and inclusive in their approach to teaching PE. Barber (2018) also believes that a better understanding of disability and inclusion for undergraduate PE students is necessary to prepare undergraduate PE students to be more inclusive when teaching in schools.

Undergraduate PE students and pre-service PE teachers perceived confidence, knowledge, attitudes and concerns about inclusion are some of the concerns around being inclusive (Forlin & Chambers, 2011). In a study by Forlin and Chambers (2011), it was found that pre-service teachers still had concerns about working with students with a disability despite having had education regarding policy and legislation related to inclusive practices. The data were derived from 67 pre-service teachers enrolled in a four year undergraduate education degree in Australia. Using the Sentiments, Attitudes and Concerns about Inclusive Education (SACIE) Scale (Loreman, Sharma, Earle, & Forlin, 2007), the pre-service teachers participated in the questionnaire pre and post-completion of an Adapted PE unit. What was discovered was that there was a high correlation between perceived levels of confidence and knowledge in relation to their attitudes and/or concerns about inclusive practices (Forlin and Chambers, 2011). Interestingly, in this study there was no improvement in positive attitudes following a practical 'hands on' experience with students with a disability. What was deemed to be important in this study was that improving knowledge and confidence about being inclusive, while necessary, does not always alleviate stress that teachers experience and that more research to understand what is needed to improve this situation in the future.

Interviewing expert educators and coaches has found that upon reflection, they too reported these concerns and indicated that better training may have alleviated some of these concerns as supported by the findings of a study by McGrath et al. (2019). This study highlighted the need for qualitative research based on other researchers who also have indicated the need for further qualitative studies (Block & Obrusnikova, 2007; Campos et al., 2015). The study by McGrath et al., used qualitative research methods conducting a multiple-individual interviews through a

case study approach (Punch & Oancea, 2014). While the respondents in the McGrath et al., study identified that they did not have ongoing PE inclusive professional development in their current workplaces, some of them did have special education training as undergraduate PE students. Their 'lived experiences' have added to the understanding of the impact of inclusive training that may address some of the concerns above.

Social Desirability Bias Implications

The literature has shown that there are studies around the world that have used questionnaires and interviews to estimate the attitudes, intentions and reflections on experiences, of PE teachers or undergraduate PE students, when working with students with a disability in a physical activity setting. A validity issue with any questionnaire and interview process in relation to studies related to inclusiveness is the possibility of elements of social desirability bias. Social desirability bias (SDB) can result in participants responding to questions in a way that may differ from their attitudes, behaviours or beliefs in an effort to look better for others or feel better about themselves (Larson, 2018). However, it must be noted that not all participants will experience SDB as this is often seen in participants with a personality trait that have a need for approval (Grimm, 2010).

Using questionnaires can help to reduce social desirability bias as they are often anonymous or can be done remotely to avoid the pressure to conform. Grimm (2010) also noted that social desirability bias is not as prevalent as people once thought. It is however, a consideration that must be taken into account when conducting any research. It is highly probable that if researching at a university that a researcher is teaching at, that focus groups may be made up of undergraduate students that are known to the researcher and must be acknowledged by the ethics application and good research design that aims to reduce any SDB.

The impact of inclusive PE training for PE teachers

Previous research conducted on the inclusive PE was designed to support better outcomes for teachers and, in turn, the improved opportunities for students with a disability to experience inclusive PE and physical activity (Barber, 2018). The outcomes of quantitative and qualitative research approaches have shown, both internationally and nationally, that inclusive training is beneficial to pre-service, undergraduate and practising teachers (Block & Rizzo, 1995; Folsom-Meek et al., 1999; Kowalski & Rizzo, 1996; Özer et al., 2013). With increased experience of working with people with a disability, PE teachers had developed more positive attitudes towards working with students with a disability (Forlin & Chambers, 2011; Lancaster & Bain, 2010). This important experience can be provided with tertiary institutions providing authentic experiences such as working with students with a disability in a physical activity setting as part of coursework (Perlman & Piletic, 2012).

Preparing pre-service and undergraduate teachers to embrace inclusion and inclusive practices creates inclusive classrooms. Pedersen et al., (2014) and Rizzo & Kirkendall, (1995) found that preparing undergraduate PE students to embrace inclusive practices will support undergraduate PE students to feel confident about working with students with a disability in a physical activity setting. Sharma et al. (2008) found inclusion training at the university level is effective when embedded across the curriculum or as a single unit. More research designed to examine the perspectives, and preparedness to work with students with a disability in a physical activity setting after completing an Adapted PE or Inclusion unit is warranted.

Research conducted in the United States, Turkey and Finland has indicated that undergraduate or pre-service teachers with academic training and practical experiences in working with students with a disability in a physical activity setting, were more positive about inclusion and being inclusive, compared with undergraduates that had little or no experience (Block & Rizzo, 1995; Folsom-Meek et al., 1999; Kowalski & Rizzo, 1996; Özer et al., 2013). Özer et al. (2013)

found in a study of 729 secondary school PE teachers, that the younger respondents had more favourable attitude scores towards working with students with a disability than older respondents. This was attributed to the fact that Turkey introduced mandated Adapted Physical Activity classes in undergraduate teacher training since 2000. This study concluded that teacher professional development should be provided to all PE teachers in order to support existing teachers to be more inclusive in their practices. There is also a need for practical experiences when working with students with a disability in a physical activity setting as this helps pre-service and undergraduate teachers understand inclusive practice (Hodge & Jansma, 1999; Hodge et al., 2002). Importantly, Coates (2012) found in his study conducted in England that 60% of the participants viewed their training as insufficient and believed that more practical training should be included in the inclusive training.

Perspectives of expert educators in the inclusive PE domain

Gordon and Bradtmiller (1992) found that interviewing experts gives us unique and authentic understanding that is based on these expert educators' personal lived experiences. Interpretation of the thoughts and experiences of expert educators to will help us to understand their perspectives of inclusive PE and inclusive PE training. In regards to interviewing experts it is noted that, 'experts, particularly when they agree, are more likely than non-experts to be correct about future developments in their field' (Gordon & Bradtmiller, 1992, p. 28). In a study conducted by Lorusso and Richards (2018), who interviewed teachers on their perspectives on inclusion, a Delphi method was adopted where questions were asked in an interview and then the responses were summarised and fed back to the interviewees. They were then asked to agree or disagree with the statements as these were fed back to them anonymously. This method, while thorough, is thought to be most useful with a triangulated approach to support it with other modes of methodology such as interviews and focus groups (Lorusso & Richards, 2018).

Horne and Timmons (2009) interviewed five teachers in their research of teachers' perspectives on inclusion in general classrooms in addition to adopting a questionnaire. The interviews were included to help the researchers understand, and verify, the participants' responses to the questionnaire (Horne & Timmons, 2009). All of the respondents in the study highlighted the need for more training when working with students with a disability in a mainstream classroom both when completing the questionnaire and then in the semi-structured interviews. Interviewing expert educators is important given their knowledge and skills in the area (DiCicco-Bloom & Crabtree, 2006).

Uniqueness of this study

This literature review has highlighted key research that has examined, nationally and internationally, the impact of an inclusive PE unit on attitudes and behaviours of pre-service and undergraduate PE teachers. Research of inclusion in PE was located, read and critically analysed to find studies, methodologies and instruments to contribute to the development of this study, and subsequently to compare and contrast the findings. From an examination of the research around the impact and need for inclusion units at an undergraduate level, the study design for this research was founded. It was the intention of this study to use a validated instrument (*PEATID-11*), a measure considered extensively within the current literature review, to test pre and post-attitudes when completing the Inclusion and Diversity in Physical Activity unit. Additionally, and to enhance the study, the research will incorporate interviews to capture the 'lived experiences' of a sample of the undergraduate PE teachers who completed the unit, and then engage in conversations with expert educators in the field to frame a robust mixed method approach.

This mixed method triangulated approach was adopted to develop a study that combined quantitative data that could be explained and examined further through the addition of focus

groups and individual interviews using a phenomenological lens. The move to how students with a disability are included in schools, including PE classes, has shifted over the years (Barber, 2018) and it is evident PE teachers have previously reported feeling underprepared (Rizzo & Kirkendall, 1995; Zanandrea & Rizzo, 1998). This has created a need for targeted and appropriate professional development both at the undergraduate and practising teacher level (Dally et al., 2019). This current research is designed to consider how undergraduate PE students felt after participating in an inclusive unit, and the reflections of the expert educators in relation to their own experiences and the skills and knowledge they believe are necessary for tertiary students.

This current research fills a gap in the literature as it takes the mixed method triangulated approach and gives undergraduate PE students a 'voice' in the research. Their 'lived experiences' are captured and analysed to add to the body of knowledge to understand the impact of inclusive education within a physical activity setting. This research will demonstrate the importance for all undergraduate PE courses to include an inclusive PE unit with a 'hands on' practical component to both challenge thinking and foster confidence, and extend the skills of undergraduate PE students. It will also provide an opportunity to reflect on the importance of professional development for PE teachers in order to improve attitudes and intentions towards working with students with a disability in a physical activity setting. Most importantly, it will facilitate an improved understanding of the impact inclusive training has on the undergraduate student, reflected through commentaries of their personal 'lived experience'. It is anticipated that the study's findings may encourage all undergraduate PE courses to include a 'hands on' practical inclusive PE unit so that ultimately all students with a disability get to participate fully in PE classes, have fun and be active.

Overall research aim of this study

The overall research aim for this study is to examine the undergraduate PE student learnings through engaging in the Inclusion and Diversity in Physical Activity unit. This overall research aim is supported by four sub-aims:

Sub-aim 1: to investigate the students' experiences while engaging in the Inclusion and Diversity in Physical Activity unit and whether they changed their perceptions of people with disabilities or working with people with a disability.

Sub-aim 2: to evaluate how students have grown and changed as a result of participating in the Inclusion and Diversity in Physical Activity unit.

Sub-aim 3: to examine the 'lived experience' of students' engagement with the Inclusion and Diversity in Physical Activity unit.

Sub-aim 4: to explore the perceptions of teachers, academics and experts in the field of inclusion regarding the incorporation of inclusion and diversity programs within undergraduate teacher education and the training of coaches.

Each of these sub-aims will be discussed further and linked to the phases of research and to the overall aim of the research. This research examines and explores how and why universities should prepare pre-service teachers to be inclusive of students with a disability in their PE classes. Further, this research investigates and celebrates 'best practice'. To do this the study was designed around an existing Inclusion and Diversity in PE unit (previously named an Adapted PE unit) that is delivered within a Bachelor of Physical Education and Sport Science. Undergraduate PE students undertaking this unit were invited to be part of the first and second phase of the research that detailed pre and post-attitudes and captured their 'lived experiences' through a series of focus groups post-completion of the unit. Undergraduate students were

encouraged to reflect upon their experiences pre and post-completion of the unit and included 'hands on' practical experiences with students with a disability.

After reviewing the theory and research examined in the literature, an overall research aim was developed to capture the impact of an Inclusion and Diversity in Physical Activity unit at an inner-western university in Melbourne, Australia. This unit, with its careful mix of theory and 'hands on' practical experiences, provided the undergraduate PE students with opportunities to become more knowledgeable, confident and skilled in working with students with a disability in a physical activity setting. This research was designed to examine the impact of this inclusive unit on the undergraduate PE students and how this impact could be compared and contrasted with studies across Australia and the world. Ultimately, PE teachers should be skilled and confident facilitators of inclusive practices within their schools allowing for all students, regardless of their abilities to participate, to have fun and learn through being active (Barber, 2018).

The overall research aim, 'to examine the undergraduate Physical Education student learnings through engaging in the inclusion and Diversity in Physical Activity unit', was developed to examine the impact of participating in the unit and to capture students' 'lived experiences' in their own words. Further, expert educators were invited to reflect on the impact of their own inclusive training, or lack of, and give thoughtful commentary about the value of an inclusive unit in the university context. As detailed in the literature review, there have been many questionnaire instruments developed to measure attitude, intention and the impact of an inclusive PE unit on pre-service and undergraduate teachers with quantitative data collection (Forlin et al., 2007; Gething, 1994; Rizzo, 1984; Sharma & Desai, 2002; Wilczenski, 1992). While this is a valuable and reliable way to collect quantitative data, a qualitative approach was also undertaken in this current research to capture the rich perspectives of the experiences of

undergraduate PE students participating in the inclusive units, and expert educators' reflections of their own experiences.

Sub-aims

Sub-aim 1

This research was designed with three phases and four sub-aims to address the overall research aim. The first sub-aim is designed to investigate students' experiences while engaging in the Inclusion and Diversity in Physical Activity unit, and specifically, to examine how their perceptions of persons with a disability or working with people with a disability changed after the completion of the inclusive unit. This sub-aim was included as a part of this study so that the results could be compared and contrasted with other studies that have used the PEATID questionnaire such as Oh et al. (2010) and Rizzo and Kirkendall (1995).

Sub-aim 2

Pedersen et al. (2014) found that the more targeted and comprehensive the inclusive training, including authentic 'hands on' experience, the more likely it is undergraduate or pre-service teachers will have better intentions towards working with students with a disability in a physical activity setting. This current research aimed to explore this further through a series of interviews to explore undergraduate PE teacher perceptions while undertaking the inclusive unit. Sub-aim 2 was developed to evaluate how students have professionally grown as a result of participating in the Inclusion and Diversity in Physical Activity unit. Questions developed for the focus group interviews examined what undergraduate PE teachers believe are critical elements to their learning and how they feel about the inclusive unit and accompanying practical 'hands on' experiences with students with a disability.

Sub-aim 3

The third sub-aim in this research directly relates to the examination of the 'lived experience' of students' engagement with the Inclusion and Diversity in Physical Activity unit. This sub-aim was developed to capture, through focus group interviews, the impact the Inclusion and Diversity in Physical Activity in the undergraduate PE students' own words. Van Manen (2016) argued that phenomenological research will only succeed when meaning is recognisable. Using focus groups to explore how the undergraduate PE students were feeling, thinking and experiencing allows for greater understanding of the fears, challenges and successes they encountered. The aim was to add to the already strong body of knowledge, for example by Pedersen et al. (2014) and Rizzo and Kirkendall (1995), around inclusive practice with the voices of the undergraduate PE teacher participants. This would also support the findings of Case et al. (2020), which indicated that further research into challenging existing measures of undergraduate PE students and pre-service PE teacher attitudes towards students with a disability may result in greater understanding and may also show awareness of the changes in the concepts of disability and inclusion.

Sub-aim 4

The fourth and final sub-aim, to explore the perceptions of teachers, academics and experts in the field of inclusion regarding the incorporation of inclusion and diversity programs in undergraduate teacher education and the training of coaches, has been designed was developed to capture the 'lived experiences' of expert educators. Reflecting upon their own experiences as an undergraduate or newly graduated PE teacher, along with their years of teaching and coaching experience, expert educators were interviewed to give an honest and thoughtful addition to the dialogue around the impact of an inclusive unit in an undergraduate PE course.

Of interest will be the reflections of not only their undergraduate experiences but also their reflections of teaching in schools and the support they received when working with students with a disability in a mainstream classroom.

Research Framework Summary

This research study was created to give further insight into the impact upon undergraduate PE teachers when participating in an Inclusion and Diversity in Physical Activity unit. It was conducted in three phases with each phase addressing the sub-aims to support the overall research question. Adopting three phases in the study: Phase 1, the quantitative *PEATID-11* questionnaire pre and post-completion of the Inclusion and Diversity in Physical Activity unit; Phase 2, the qualitative undergraduate PE teacher focus groups; and Phase 3, the expert educator individual interviews, the research used adopted a triangulation method to robustly examine the impact of inclusive PE training on attitudes, behaviour and intentions towards working with students with a disability in a physical activity setting.

To further examine the need for an inclusive PE unit in an undergraduate PE degree, the expert educators were interviewed to reflect upon both their own undergraduate experiences and the experiences they have now as educators in the tertiary PE domain. Questions were posed to the expert educators regarding their understanding of the need for inclusive units to be taught and how the inclusive units should or could be delivered. This method of collecting both qualitative and quantitative data, using a mixed methods approach, to examine the effects of inclusive PE units and inclusive PE unit delivery on attitudes and ultimately behaviours is very important to the deeper understanding of the challenges and successes of inclusive PE. This is supported by research conducted by Qi and Ha (2012), who also posited that a mixed method research design would be effective in helping to understand what elements of an inclusive PE unit are most appropriate and useful in helping to change attitudes and behaviours of PE teachers.

Summary

Combining three phases of the study to ultimately address the overall research aim to examine the undergraduate PE student learnings through engaging in the Inclusion and Diversity in

Physical Activity unit is a considered and measured research plan. This literature review has highlighted recent research that has examined PE undergraduate student attitudes and behaviours towards students with a disability in a physical activity setting. The review reveals that although the research indicates that participation in an inclusive unit will provide, in most cases, a positive impact on attitudes and behaviour, teacher attitudes towards inclusive practices are still of concern (Block et al., 2017).

This research study will investigate the impact of an inclusive PE unit with 'hands on' practical learning opportunities, with a view to providing evidence to demonstrate how this will create opportunity for more favourable attitudes and behaviours for undergraduate PE students. This, accompanied by the 'lived experience' data, will seek to present evidence to demonstrate the need for an Inclusion and Diversity in Physical Activity or Adapted PE unit, to be included in all undergraduate PE courses. Additionally, it is anticipated that the insights of the expert educators, with both reflections from a personal experience and as an expert educator, will also add to the understanding of the impact of inclusive PE on undergraduate PE students.

As Penney et al. (2018) indicated, addressing inclusion in PE is still a difficult challenge, and there must be an effort to address this challenge. By creating authentic, inclusive training for our undergraduate PE students and sport coaches, the opportunities for all students to be included is maximised.

Chapter 3 – Research Methodology

Background introduction

Triangulation study design

For the purpose of this study, a triangulation approach was adopted to methodologically integrate each of the three phases of the research. This design will allow for more than one process to collect data on the same topic. 'Triangulation means mixing approaches to get two or three viewpoints upon the things being studied' (Olsen, 2004, p. 4). Denzin (2007) proposed four types of triangulation: data triangulation, investigative triangulation, theory triangulation and methodological triangulation. This study adopts the fourth premise of methodological triangulation and uses both a quantitative questionnaire and qualitative focus group and individual interviews to explore the overarching research aim. This research is a mixed-method comprising of both qualitative and quantitative data collection and analysis.

The methodological triangulation approach is derived from the premise that all individual research methods have flaws and that a mixed method or 'triangulation approach' will help to alleviate that through the strong connection of more than one method (Denzin, 2007; Noble & Heale, 2019; Turner et al., 2017). This approach was adopted to ensure that the three planned phases of the research were solid as the reliability and validity of data and results are enhanced by methodological triangulation (Denzin, 2007; Fusch et al., 2018). This approach allowed for more than one method to collect data on the same topic.

> Good research practice obligates the researcher to triangulate, that is, to use multiple methods, data sources, and researchers to enhance the validity of research findings … it is necessary to use multiple methods and sources of data in the execution of a study in order to withstand critique by colleagues (Mathison, 1988, p. 13).

This triangulated approach was chosen as the three phases were designed to answer a common aim with multiple data sources involving more than one method (Denzin, 2007). This gives the researcher the ability to analyse the data and present those results in a manner that allows the reader to understand the research problem from several perspectives (Fusch et al., 2018). This approach supports this research to add to the body of knowledge in the area of research that explores the impact of inclusive PE training on undergraduate PE students, which has been predominantly quantitative in nature to date.

This triangulated research methodology is carefully considered to create a compelling and detailed data set with which examines our sub-aims and overall research aim. In a review of inclusion in PE research, it was found that 67% of studies were quantitative in nature, 28% used a qualitative approach and only 4% used a mixed method approach (Qi & Ha, 2012). Additionally 65% of the research was focused on the attitudes and intentions of pre-service and undergraduate teachers, as the idea that behaviours are guided by attitudes is a belief many researchers hold (Qi & Ha, 2012). The belief that attitudes of pre-service and undergraduate PE teachers affect their ability to be inclusive has been researched by many studies and will be explored further in this research project using a mixed method, three phases research design that will use qualitative data to further enhance and support the quantitative data results.

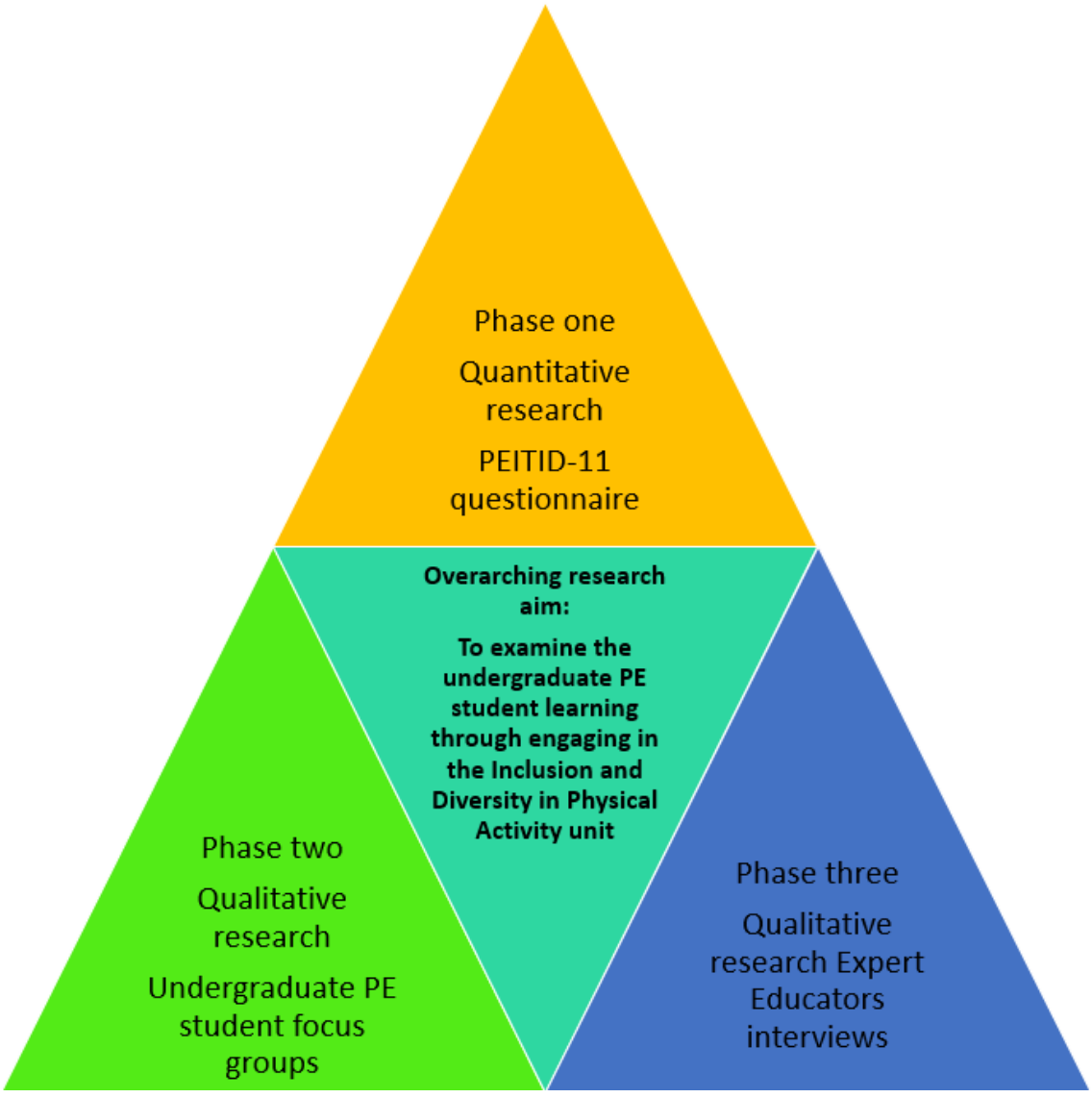
The research is designed to be conducted using three different forms of data collection. A quantitative questionnaire will be used to measure pre and post-attitudinal changes with three sets of undergraduate PE students. The next phase involved the investigation of the impact of participating in an Adapted PE program. A series of three undergraduate PE student focus groups will be conducted with a sample of the same student cohort. Additionally, eight individual interviews will be conducted with teachers, academics and coaches, or expert educators, with more than five years' experience and with an understanding of working with students with a disability. By analysing both the qualitative and quantitative data, using the

students' 'lived experiences' and the expert educators' reflections on the importance of this type of unit in a course for pre-service teachers, the research will allow for a thorough examination of the any changes that may occur in undergraduate PE students during and after engaging in the unit. The research also seeks to examine the perceived importance of that experience by both the undergraduate PE students and the expert educators.

As Phase 1 of the research is quantitative in design and the subsequent Phase 2 and Phase 3 of the research are qualitative in nature, the figure below depicts the study design in relation to the triangulation methodology.

Figure 1

The study design in relation to the triangulation methodology



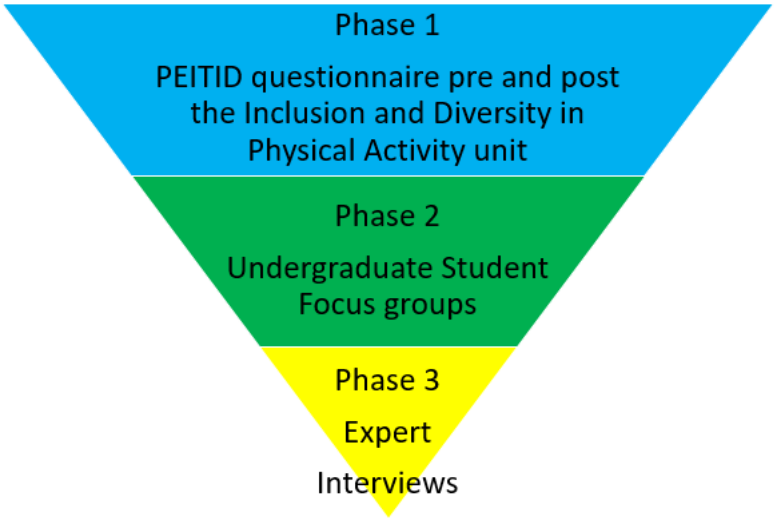
By analysing both the qualitative and quantitative data, the research is able to provide a comprehensive overview of undergraduate PE student learnings and how the industry, through the reflections of expert educators, perceives the importance of this learning. The collection of data from all three phases of the research had been designed to address the overall aim and sub-aims.

This research will showcase the significance of the undergraduate PE student experience and the perception of the value and skills set that is achieved through these experiences. The use of the quantitative questionnaire alongside the student focus groups will allow for an in-depth understanding of the undergraduate PE student experience. These data, when compared to the expert educators' perceptions of what undergraduate PE students need and the importance of inclusive education, will then provide the basis for a better understanding of the importance of such inclusive education and opportunities for undergraduate PE students.

The following figure clearly outlines the three phases of the research. The three phases have been designed to create a study that delves deeply into the experiences of undergraduate PE students undertaking the Inclusion and Diversity in Physical Activity unit.

Figure 2.

The three phases of this research study



The overarching research aim for this study is: *To examine the undergraduate Physical Education student learnings through engaging in the Inclusion and Diversity in Physical Activity unit.* To address this overall research aim, four sub-aims were developed as below:

Sub-aim 1

To consider the students' experiences while engaging in the Inclusion and Diversity in Physical Activity unit and if they changed their perceptions of people with disabilities or working with people with a disability.

This research aim will be addressed in Phase 1 and Phase 2. The quantitative data obtained through the *PEATID-11* questionnaire along with the focus group thematic analysis will be used to answer this research question.

Sub-aim 2

To explore how students have grown and changed as a result of participating in the Inclusion and Diversity in Physical Activity unit.

This sub-aim is linked to Phases 2 and 3, using the *PEATID-11* results and the student focus group thematic analysis.

Sub-aim 3

To consider the 'lived experience' of students' engagement with the Inclusion and Diversity in Physical Activity unit.

This sub-aim will be addressed though the undergraduate PE student focus group thematic analysis. This sub-aim will capture the undergraduate PE student voice. This sub-aim will be addressed in Chapter 5.

Sub-aim 4

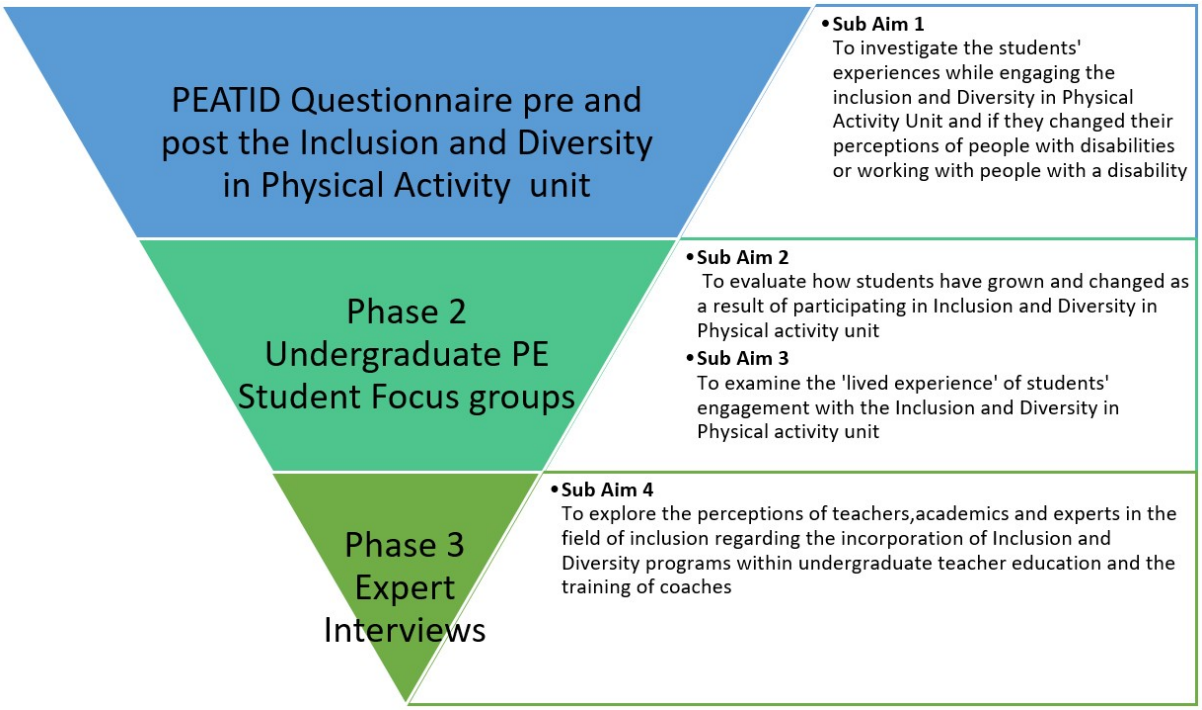
To explore what teachers, academics and experts in the field of inclusion perceive of the importance for a unit such as this, to be included in undergraduate teacher training or training of coaches.

This sub-aim will be addressed by the one-on-one interviews conducted with teachers, academics and coaches to ascertain their reflections. Expert educators will be asked a series of questions which will be recorded, transcribed and analysed for common themes and/or other significant threads. This will be addressed in Phase 3 of the research data collection.

These four sub-aims have been linked to each phase of the research as illustrated in Figure 3.

Figure 3

Relationship between the research resign and the research questions



Outline of the unit being examined

The Inclusion and Diversity in Physical Activity unit was re-developed in 2018 for delivery in the block mode of teaching that was adopted by an inner-western Melbourne university that year. Previously to this, the unit was titled Adapted PE and was delivered in the third and final year of the Bachelor of Physical Education and Sport Science in a traditional 12 week semester mode. With the introduction of the newly formed First Year College, a college dedicated to the transition of first year students to university life, the Adapted PE unit was moved from third year to first year, as it is a highly practical and engaging unit, and further, the expert staff had moved to the First Year College.

It is important to note that previous to 2018, the unit was a 36-hour unit (1 x 1-hour lecture and 1 x 2-hour practical workshop) over a 12-week semester. During this 12-week semester, the undergraduate PE students were able to work with students from the local special schools over and eight week period. In 2018, due to this university's adoption of the block mode of teaching, the unit was re-designed to be delivered in a four-week period (11 x 3 hour workshops per block delivered in 4 weeks) with no lectures included. Undergraduate PE students had three sessions working directly with students with a disability, one school sports day and one school visit included in the four-week block delivery, instead of 8 weeks of working with local special schools. Students enrolled in the Bachelor of Physical Education and Sport Science are not completing a teacher education course but an undergraduate degree that fulfils the content requirements of a PE degree that can then, with the addition of a Master of Teaching postgraduate degree, qualify them as a PE teacher. For this reason, they will be referred to as undergraduate PE students rather than pre-service teachers.

The three sessions in the Inclusion and Diversity in Physical Activity unit involved working with students from local special schools conducting inclusive physical activity sessions in a very large gymnasium utilising three Basketball courts. Five local special schools were invited

to be a part of the program and each of the school brought along between 8-25 students in total. The students from the special schools had students with a range of disabilities both physical and/or intellectual. The students ranged in ages from 8 – 15 years old and comprised both males and females. Some of the students used communication devices (iPad), and a smaller number of students had mobility difficulties and used wheelchairs or walking frames. Each school also brought along any support workers and teachers responsible for the students and were all actively involved in the program to support both their own students and the undergraduate PE students as they conducted the physical activity sessions.

Undergraduate PE students were allocated into groups of three to four and each week one member of the group was the lead facilitator for the physical activity sessions for the students with a disability. The undergraduate PE students were assigned a group of 3-6 students with a disability to plan and prepare two physical activity sessions. The undergraduate PE students were given the ages of the students with a disability but no specific information about their disabilities. The first physical activity session was prepared for them by the tertiary staff in order for them to begin confidently and with a clear plan (Stilkova, 2012). With a pre-prepared plan the undergraduate PE students could then assess and modify activities throughout the session in order to adequately provide opportunities for all of the students to be active and have fun. During the session, the tertiary staff supported the undergraduate PE students by suggesting modifications, giving specific feedback and generally providing positivity to instil confidence especially for those undergraduate PE students who were anxious or unsure of themselves.

After the first physical activity session with the special schools of each block, the tertiary staff held a de-briefing session with the undergraduate PE students to talk about their experiences and to assist the students with their preparation and planning for the next two physical activity sessions. In their allocated groups the undergraduate PE students planned a series of activities

that were fun and inclusive that fully involved everyone. These session plans were discussed in class with the tertiary staff member and other members of the undergraduate PE class to ascertain appropriateness and any possible modifications that could be incorporated. At the conclusion of the three physical activity sessions with the local special school students, the undergraduate PE students were asked to reflect on their experiences. This involved producing a group presentation assessment that detailed the challenges and successes they had with the planned physical activity sessions and their allocated students, and what they had learnt about themselves during this experience.

The Inclusion and Diversity in Physical Activity unit was developed as a core unit of study within the Physical Education course and is also a core unit of study in the Bachelor of Speech Pathology that commenced in 2020. The addition of the Speech Pathology students into this unit was organised in conjunction with the Course Chair (Coordinator) of the Bachelor of Speech Pathology. Speech Pathology students were added to this unit given that it is a highly interactive and practical unit which allows students to work with individuals with a disability in a supported and structured environment. As many speech pathologists will work closely with students with a disability, the learning opportunities, in particular the 'hands on' practical experiences were considered an important addition to their confidence and skills set.

The unit was designed to introduce undergraduate PE students to the important concepts of inclusion and diversity. The Inclusion and Diversity in Physical Activity unit also introduced undergraduate PE students to teaching and working with students with a disability in a physical activity setting. An opportunity to connect with the local schools in the community and to provide authentic learning experiences was considered in the development of this unit. This university's Course Approval and Management System that houses all the unit and course outlines describes the Inclusion and Diversity in Physical Activity unit as below:

> This unit introduces students to the concepts of diversity and inclusive practices within the field of PE, physical activity and sport. It will require students to examine barriers and enablers for diverse populations related to inclusive practice and evaluate this in a practical setting (CAMS, 25 January 25 2020).

Each unit must have explicit learning outcomes that are linked to assessment tasks. There are four learning outcomes in this unit as detailed below:

1. Examine issues relating to diversity and inclusion in PE, sport and physical activity;
2. Review and design inclusive practices to PE, sport and physical activity;
3. Evaluate the benefits and challenges of promoting inclusion and diversity in a PE, sport and physical activity settings; and
4. Demonstrate ability to collaborate with a diverse range of people in a variety of settings.

There are four assessment tasks in this unit. They are:

1. Case study
2. Preparation for practical sessions
3. Group practical session delivery
4. Group Presentation – Reflection of the practical experiences

The unit is delivered in 11 x 3-hour sessions over four weeks (11 sessions and a total of 33 hours).

During this time, the undergraduate PE students cover the following concepts in the workshop sessions:

1. Disability
2. Gender

3. Religion
4. Culture (including Indigenous culture)
5. Lesbian, gay, bisexual, trans, intersex and queer (LGBTIQ)

The practical components of the unit include:

1. Visits to a special school in the local area
2. Active participation in a Goalball (game for the blind) session
3. Active participation in a Wheelchair Basketball or Football session
4. Active participation in practical sessions to learn how to modify activities for greater inclusion
5. Conducting a practical physical activity or 'sports day' at a local special school
6. Planning and delivering of three practical physical activity sessions for local special schools that are invited to the program held at the university.

All staff facilitators are PE or sport coaching–trained staff with an interest in inclusion and diversity. As noted above, undergraduate PE students completing this unit have many opportunities to work with people with a disability. In most cases, undergraduate PE students attended a school visit (observation), participated in a school's sports day and were tasked to plan, prepare and organise three physical activity sessions. This unit is very 'hands on' and the 'learning is in the doing'. All of the assessments in this unit were linked explicitly to the learning outcomes and the experiences in the unit. The assessments for this unit included; a case study, preparation for practical session, groups session delivery and a group practical experience reflection.

The Practice Integrated Learning (PIL) component (working with community and industry) of the unit is delivered during the allocated practical sessions and take place over three weeks. Special schools and special development schools in the local area are invited to take part in

inclusive physical activity sessions held at an off-campus gymnasium belonging to the university. Over three 50 minute sessions, local special and special development schools bus their students to the gymnasium at the University campus. Each school brings between 6-15 students ranging in ages from 12-15 years and of various abilities. Once at the gymnasium, these students are allocated a group and are taken through a physical activity session lead by the undergraduate PE students. These sessions are led by the undergraduate PE students and are modified to ensure that all students can participate to the best of their ability.

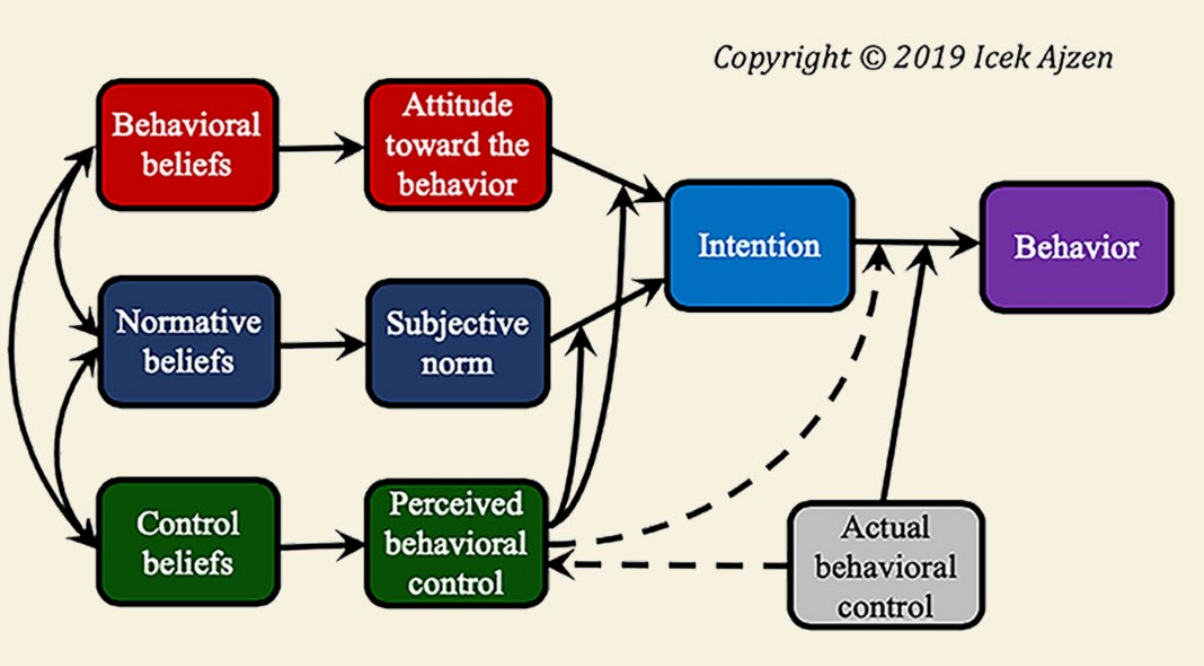
In addition to the PIL sessions a 'sports day 'is conducted at one of the local special or special development schools in conjunction with teachers from the school. A meeting prior to the sports day is organised between the school teachers and the facilitators of the Inclusion and Diversity in Physical Activity unit, to ensure that the activities are appropriate to the schools' needs. The undergraduate PE students are able to assist in the planning and preparation of the sports day and the activities being conducted. On the day, the undergraduate PE students will be allocated a station in which they will assist the students with a disability with that particular sports activity. Undergraduate PE students, the school and the students with a disability all benefit from this collaboration.

TPB and the relationship to Phase 1 of this research

The Theory of Planned Behaviour (TPB) (Ajzen & Fishbein, 1988) was developed to endeavour to explain the way people behave. Since then TPB has used in many research studies to examine people's behaviour by looking at the variables that lead to those behaviours as illustrated in Figure 4.

Figure 4:

The Theory of Planned Behaviour



There have been a number of studies that have examined undergraduate and pre-service teachers' attitudes towards inclusion (Martin, 2011; Pedersen et al., 2014). The study by Martin (2011) was designed to augment Rizzo's research (Rizzo, 1993) that examined pre-service and undergraduate physical educators' attitudes towards inclusion. Despite the numerous studies that have been conducted in Europe and the United States, Australia has had fewer studies that have examined the undergraduate PE students and practising teacher attitudes towards working with students with a disability and the positive effects of a well-structured Adapted PE programs developing teachers that are far more positive towards inclusion.

Phase 1: Research paradigm and methodology

The first sub-aim will be examined with a questionnaire, while the other sub-aims will be examined through undergraduate PE student focus groups and individual interviews with industry. Using pre and post-questionnaires, Phase 1 of the research adopted a quantitative

design within the positivist research paradigm, as the paradigm 'defines a world view to research, which is grounded in what is known in research methods as the scientific method of investigation' (Kivunja & Kuyini, 2017, p. 30). The positivist paradigm will typically use quantitative methods to ensure the there are no subjective biases between the research and the researchers. In this case, the quantitative data were gathered using a valid and reliable instrument (the *PEATID-11* questionnaire) that supported the generalisability of the findings and allowed for consideration of the results beyond the current study. Rizzo (1984) had the original PEATH questionnaire validated by six nationally prominent Adapted PE specialist and the subsequent versions of the questionnaire including the *PEATID-11* addressed sampling validity in the preliminary stages of the development of the questionnaires.

In a study of Australian primary and secondary classrooms, it was reported that 'teacher attitudes were central to inclusive practice' (Carlson et al., 2012, p. 31). This study was not specific to PE but is important in demonstrating the relationship between attitudes and behaviours. Further, Pedersen et al. (2014) in their Australian study showed that tertiary pre-service PE students did, in fact, have a more favourable disposition towards teaching students with a disability as they engaged in more training and acquired relevant knowledge. To fully explore the outcomes of undergraduate tertiary students participating in an inclusive PE unit or training, the next phase of the research will utilise the undergraduate PE student voices to better understand their experiences and to ascertain the benefits of the inclusion of this unit in the development of skills and confidence in this area.

In fact, 'the relationship between attitudes and behaviours suggest that inclusive attitudes can create conditions for engaging in inclusive practices, which in turn results in more inclusive attitudes' (Carlson et al., 2012, p. 31). This premise can best be described as the TPB (Ajzen, 1985). This contention is consistent with the predictions posited by the TPB (Ajzen, 1985). It was theorised that 'people's behaviour follows reasonably from their beliefs, attitudes, and

intentions' (Ajzen & Fishbein, 2005, p. 174). On that basis, this phase of the research is designed to be qualitative in nature and has employed undergraduate PE student focus groups to capture the interview-based perspectives of the undergraduate PE students after their participation in the Inclusion and Diversity in Physical Activity unit.

Phase 2: Research paradigm and methodology

Chapter 5 will address sub-aims 2 and 3. This phase of the data has been designed to explore the 'lived experience' of undergraduate PE students after they have completed the Inclusion and Diversity in Physical Activity unit. This next phase has been designed to add to the body of knowledge, as most previous studies have focused on quantitative research using questionnaires as an instrument. This second phase of the research will address the overarching research aim: to examine the undergraduate PE student learnings through engaging in the Inclusion and Diversity in Physical Activity unit**,** as well as two sub-aims.

Sub-aim 2

To explore how students have grown and changed as a result of participating in the Inclusion and Diversity in Physical Activity unit.

Sub-aim 3

To consider the 'lived experience' of students' engagement with the Inclusion and Diversity in Physical Activity unit.

The relationship between the overall research aim and the two sub-aims is shown in Figure 3.

To examine 'lived experiences' of the undergraduate PE student experience, the research has used a phenomenological lens. Phenomenology allows the researcher to be attentive to details and normalities that may seem trivial, but in fact may be insightful and compelling (Van Manen, 2016). Sokolowski (2000) proposed that phenomenology is the study of the way

things are presented to us through the human experience. The focus group questions were designed to have the undergraduate PE students reflect upon what they had learned, what they felt about their engagement, and other experiences they may have had during the Inclusion and Diversity in Physical Activity unit. A focus group approach was chosen, because this can allow for shared insights into what the undergraduate PE students were experiencing and allows for a deep understanding of the 'lived experience' in working with students with a disability in a physical activity setting. As indicated by Merriam (2002), the use of a phenomenological approach to the research is to gain meaning through exploring the meaning through a direct and often shared experience as in the case of the undergraduate PE students' experiences with the students with disabilities in their practical classes. Focus groups question and response data give the opportunity to understand and explore the personal and real experiences of the undergraduate PE students. These responses can then be compared to the data derived from the *PEATID-11* questionnaire and the industry experts' interview reflections that will then give this research a rich set of data in which to draw conclusions.

The undergraduate PE students were invited to be a part of the focus groups post-completion of the Inclusion and Diversity in Physical Activity unit. Each undergraduate PE student was asked to reflect upon their personal experiences post-completion of the Inclusions and Diversity in Physical Activity unit. Post-unit completion reflection was important as a person cannot reflect upon their experiences while in the experience (Van Manen, 2016). In addition, phenomenological research can aid in the understanding of how people behave, communicate and learn (Neubauer et al., 2019). This is important as the research aims to understand what the undergraduate PE students learned and how they felt during and after the experiencing the unit, rather than just measuring if change has occurred. As the primary researcher and a qualified PE teacher and practicing academic, researcher bias was considered during this research. When developing the focus group questions and interview questions, as well as during

the thematic analyses of these interviews the research team were cognisant of the our personal societal discourse. In accordance with (Wadams and Park, 2018) using loosely structured interviews, being a responsive investigator and thinking with critical reflexivity were taken into account during the development of the research and the analysis and discussion of results.

Phase 3: Research paradigm and methodology

Phase 3 of the research was designed to address Sub-aim 4: *To explore the perceptions of teachers, academics and experts in the field of inclusion regarding the incorporation of inclusion and diversity programs within undergraduate teacher education and the training of coaches.*

This phase of the research will use phenomenology as a research approach through an inquiry paradigm utilising qualitative methods. In this phase of the study, the researcher and the questions were the instruments through which the, difficult to measure, variables were investigated. Using descriptive, or hermeneutical phenomenology, this phase of the research aimed to interpret meaning from the participants responses to the set of questions posed about their experiences as an expert educator. The phenomenological approach to this phase of the research seeks to support the qualitative paradigm that aims to sees humans in their most natural scenario and provide a genuine representation of their reality (Padilla-Díaz, 2015).

To do this, eight education-trained academics, teachers and coaches (industry experts) will be individually interviewed to examine their views on the importance of an Adapted PE unit being included in the undergraduate PE courses that deals with inclusion and diversity. This phase of the research will be undertaken during the COVID-19 pandemic and as such, the planned face-to-face interviews were conducted via Webex. Webex as an online platform was able to incorporate synchronous interviews, as a substitute to the face-to-face interviews due to Australian social distancing laws during the proposed data collection period. Webex is web

conferencing and videoconferencing application that allows participants to video call and record video calls for future reference from their home office or work office. To accommodate for this, an amendment to the existing approved ethics application was made and approved.

Industry experts will be made aware of the change and will be given the option to opt out or continue with the interview online. Industry experts will be contacted via email and were provided with a copy of the interview questions, interview protocol handout and a consent form (see Appendix 2). Following the email invitation being sent, a time that is suitable for both the industry expert and the interviewer will be organised and a Webex link and calendar invitation will be sent to the individuals along with instructions on how to use Webex if they have not used this platform previously. If all industry experts agreed to be interviewed, each interview will be recorded online. Each interview is anticipated to be approximately 30 minutes in duration and will comprised six common questions.

Despite interviews conducted via technology being considered inferior, due to a lesser ability to establish trust and rapport (McCoyd & Kerson, 2006), due to the Australian social distancing laws during the COVID-19 pandemic at the time of scheduled collection there will be no alternative. All measures will be taken to create a positive and comfortable rapport with the industry expert in the few minutes prior to the formal questions. Once the interviews are completed, the transcripts of the recorded interviews will be transcribed and a thematic analysis will be completed. Common themes will be identified, examined and discussed to establish thorough data, and the results will form the basis to discuss the reflections of the experts.

Resultant outcomes of both Phase 1 and Phase 2 of the research will then be compared to ascertain commonalities or differences and to be the basis for recommendations for future research and future practice. Phase 3 will allow for a retrospective and reflective view of the undergraduate experience with the added benefit of reflection of current tertiary practices through the insights of expert educators. The outcomes of the three phases of the research will

be discussed in Chapter 7, along with observations and recommendations made to improve the implementation of inclusive practices in undergraduate PE courses in the future.

Summary

To summarise, this research has been designed using a triangulated mixed method approach to use multiple data sources to answer a common question (Denzin, 2007). As only 4% of recently conducted inclusive PE research has used a mixed method, dominated by a purely quantitative methods, this study will allow for a robust examination of both the quantitative and qualitative data in a much broader way (Qi & Ha, 2012). This research will inform future practice and future research in the area of inclusion in PE with a view to improving opportunities for students with a disability to participate in a fun, active physical activity.

Chapter 4 – Phase 1 of the research

Introduction to Phase 1- Quantitative data collection and analyses

Phase 1 of the research involved a quantitative evaluation of undergraduate PE student responses to the web-based version of the *PEATID-11* questionnaire. This questionnaire was administered pre and post-completion of the Inclusion and Diversity in Physical Activity unit in each of the four-week blocks the unit was delivered in. As the unit was taught on three occasions (or over three blocks), data were collected pre and post each unit delivery occurrence. This chapter outlines Phase 1 of the research; specifically, the method that includes details of participants, questionnaire data collection and procedure, the method of questionnaire data analysis and results. This chapter will give a detailed discussion and analysis of the results that will detail the importance of this phase of the study.

Relationship between the research questions and Phase 1

Phase 1 of the research is linked specifically to the Sub-aim 1: *To investigate the students' experiences while engaging in the Inclusion and Diversity in Physical Activity unit and if they changed their perceptions of people with disabilities or working with people with a disability.*

The PEATH questionnaire (Rizzo, 1984) was designed specifically to measure the attitudes of pre-service teachers' pre and post-completion of an Adapted PE unit in tertiary settings and PE teachers working with students with a disability. In this research the *PEATID-11* questionnaire will be used to examine the attitudes and intentions of undergraduate PE students enrolled and undertaking an Inclusion and Diversity in Physical Activity unit (Adapted PE unit). Permission was accessed to use the *PEATID-11* questionnaire in this research by indirectly contacting the author via email. Understanding PE teacher and undergraduate PE student attitudes is deemed important as teacher attitudes have an influence on whether a quality inclusive PE program can be delivered (Rizzo & Vispoel, 1992). The undergraduate PE students were provided with

many opportunities to work closely with students with a disability, in conjunction with unit classroom workshops that challenged stereotypes, and provided the undergraduate PE students with accurate information based on current research in all of the areas of inclusive practices.

Using a pre-test and post-test questionnaire to examine the impact of the inclusive unit on the attitudes of the undergraduate PE teachers is a widespread manner to collect data as shown in other research of attitudes of pre-service and undergraduate PE teacher pre and post an inclusive PE unit of study (Gürsel, 2007; Hodge et al., 2002; Rizzo & Vispoel, 1992). This method allows for easily collected data and the ability to use statistical software such as Statistical Package for the Social Sciences (SPSS) to configure the data into meaningful outputs that can then be compared and contrasted with similar studies and examined for statistical significance (Cramer, 2003). This research will use SPSS to examine variables in the data and consider the results in an objective manner.

Using the questionnaire results from the pre-test period as a baseline, the post-questionnaire results enabled an evaluation of what, if any, changes occurred and if this could be attributed to the knowledge, skills and experience gained during the unit of study. The questionnaire data also showed what, if anything, the students learned and this was evident when examining the open-ended question at the end of the questionnaire that clearly showed learning had occurred.

Method

Participants

A cohort of students (n =122) enrolled over three blocks, who were completing the Inclusion and Diversity in Physical Activity unit in Semester 2, 2019 at an inner Western Melbourne university, were invited (Session 1 and Session 11) to respond to a questionnaire (*PEATID-11*) pre and post completing the Inclusion and Diversity in Physical Activity unit. All of the students were enrolled in the three-year undergraduate Bachelor of Physical Education and

Sport Science. This Bachelor of Physical Education and Sport Science is a undergraduate degree with the large majority of students going on to complete a Master of Teaching and go on to teach in a school as a PE teacher. For clarity these tertiary PE students will now be referred to as undergraduate PE students. In total, 86 participant responses, 70% of the total cohort, were collected pre the commencement of the Inclusion and Diversity in Physical Activity unit and 60% (n=74) were collected post the unit. When collating the data, it was found that only 29 participants completed the questionnaire at both pre and post-data collection points.

Table 1

Undergraduate PE students who identified gender in the pre and post-unit questionnaire responses

Gender	Number of respondents Pre-unit response	Number of respondents Post-unit response
Male	50	45
Female	17	16
Other	2	0
Did not respond	17	13
Total	86	74

A larger number of males completed the questionnaire as there are more males enrolled in the College of Sport and Exercise Science in 2019 for which this is a core unit in the first year of study. There was also a higher number of students in the 18–25 age group as would be expected in an undergraduate degree program. There are greater numbers of 18 to 25-year-olds in each class that is being delivered in the course. The average age of the students completing the pre

and post-questionnaire was 21.1 years. Table 1 indicates the undergraduate PE student responses by gender and age. Table 2 indicates the undergraduate PE student responses to the *PEATID-11* questionnaire pre and post completion of the unit by age.

Table 2

Undergraduate PE student age categories who completed the pre-unit questionnaire

Age	Number of respondents Pre-questionnaire	Number of respondents Pre-questionnaire
18–24	61	56
25–34	6	4
35–44	2	1
Did not respond	17	13
Total	86	74

Development of the *PEATID-11* questionnaire

TPB (Ajzen, 1985) is included, and has been integrated, in the research tool, the initial Physical Educators' Attitude Towards Teaching the Handicapped survey (PEATH) (Rizzo, 1984) and then later in the updated *PEATID-11* (Oh et al., 2010). The *PEATID-11* questionnaire is based on a series of statements that require participants to reflect on their beliefs on how they would teach students with a disability in their mainstream classes. The questionnaire has been the basis for many studies relating to PE and inclusion around the world (Block & Rizzo, 1995; Ellis et al., 2012; Kowalski & Rizzo, 1996; Oh et al., 2010; Pedersen et al., 2014; Rizzo & Kirkendall, 1995; Schoffstall & Ackerman, 2007). The *PEATID-11* questionnaire has also been adapted in a variety of ways to examine other variables such as gender and severity of disability, to name a few (Block & Rizzo, 1995; Ellis et al., 2012; Kowalski & Rizzo, 1996; Oh et al., 2010; Pedersen et al., 2014; Rizzo & Kirkendall, 1995; Schoffstall & Ackerman, 2007).

The *PEATID-11* survey has been used in several Australian studies of Adapted PE programs (Apache & Rizzo, 2005; Martin & Kudláček, 2010; Oh et al., 2010; Pedersen et al., 2014; Schoffstall & Ackerman, 2007). Most recently Pedersen et al. (2014) used the *PEATID-11* survey to examine the preparedness of Australian pre-service and undergraduate PE teachers to teach inclusive PE. The use of the measure within this study supported access to insights into the importance of Adapted PE undergraduate programs in Australia. With more applied and current Australian evidence that tertiary programs are producing better-prepared undergraduate PE students with a better attitude towards working with people with a disability, we may be able to provide opportunities for students with a disability to be more included in all PE classes.

The *PEATID-11* questionnaire was developed and later re-developed by Rizzo in 1984, 1986, and 1993. The *PEATID-11* questionnaire was developed further from the PEATH survey (Rizzo, 1985) which was based on the TRA (Fishbein & Ajzen, 1980).

The *PEATID-11* questionnaire consists of 35 questions measuring the belief and behaviour variables as detailed in Table 3. These belief based items were then grouped into seven categories based on the TPB; Intention, Attitude, Subjective Norm, Normative Beliefs, Perceived Behavioural Controls, Behavioural Beliefs, and Control Beliefs.

Table 3

Belief item components of the *PEATID-11* questionnaire

Component	Number of Item(s)
Intention	2
Attitude	3
Subjective Norm	7
Perceived Behaviour Control	4

Behavioural Beliefs	3
Evaluation of Behavioural Beliefs	3
Motivation to Comply with Subjective Norms	6
Perceived Barriers	3
Outcomes of the Perceived Barriers	3
Self-reported Behaviour	1

PEATID-11 **instrument**

The *PEATID-11* is a self-reporting questionnaire that gives a preamble vignette about a student named Hannah, who has ADHD, before requiring participants to respond to questions based on the vignette.

For this research the vignette that was used was from the original survey was provided as below:

> ADHD Vignette – Assume for a moment that you have just been told that a student named Hannah, who has attention deficit hyperactivity disorder (ADHD), has just transferred from another school into yours and will be attending your PE class starting next week. Last year your school system began a countywide PE testing program based on the state standards. Hannah is physically fit and she is an active participant. Her gross motor skills are in the above average range. Her eye-hand coordination is adequate for a 9 year old. Hannah is beginning to develop the decision making ability to execute skills in game situations (Rizzo & Vispoel, 1992).

Each of the questions had a 7 point Likert scale ranging from 1 strongly disagree to 7 strongly agree that the participants responded to. There was also one open-ended question where

students were asked to record what modifications, if any, they would make to accommodate Hannah in their PE classes. Further to this, the questionnaire also asked students to provide demographic and personal history details of their age, gender, Adapted PE experience, how many courses (if any) they had taken, and whether they had any experience in teaching people with a disability.

Qualtrics was used to facilitate the access to the questionnaire and record the data pre the students beginning and post-completion of the unit. Qualtrics was used as it is web-based software that is easy to use for both the researcher and the participating students. The participating students were sent a link via the learning management system announcements and also through a personal student email. This link allowed for access to the *PEATID-11* questionnaire through a mobile phone device or computer or laptop.

Online questionnaires have many advantages (Kuter & Yilmaz, 2001). Online questionnaires can be completed by the participant quickly and in a time-efficient and flexible way. They also allow for interactivity without interviewer bias, can be personalised, allow for quick follow-up, are cost-effective and have less processing errors (Chang & Vowles, 2013). For these reasons, the decision to conduct the *PEATID-11* questionnaire via Qualtrics as an online questionnaire was taken.

Procedure

Announcements inviting the undergraduate PE students enrolled in the Inclusion and Diversity in Physical Activity unit to be a part of the research, were uploaded to the learning management system and the undergraduate PE students were also emailed inviting them to participate in the *PEATID-11* questionnaire. In each of the announcements and emails to the undergraduate PE students, a link to the questionnaire (via Qualtrics) was provided. The link allowed the undergraduate PE students access to the questionnaire on any device from which they were

accessing their email or through the learning management system. Many undergraduate PE students completed the questionnaire on their laptops and mobile phones. Teaching facilitators also encouraged the undergraduate PE students to take part in the research by indicating the importance of the research. All undergraduate PE students were notified that participation in the questionnaire was voluntary and those that agreed to participate checked the 'I agree' box as part of beginning the questionnaire. The decision was made to deliver the questionnaire to the students' pre and post-completion of the unit. This was to collect data relating to attitudes pre the completion of the unit and post-completion of the unit to ascertain any changes in attitudes.

As this unit is being delivered in block mode at an inner Western Melbourne university, the pre and post-questionnaire was collected over three different time frames during one semester: Semester 2 Block 1, Block 2 and Block 4. Each unit was delivered with the same content, activities, practical experiences and assessment tasks. Each undergraduate PE student enrolled in the Inclusion and Diversity in Physical Activity unit cohort was invited to be a part of the research on the first day of the block and to complete the post-questionnaire on the last day of block teaching.

Benefits to using the *PEATID-11* questionnaire via Qualtrics included being able to collect the questionnaire results in real time and then being able to export the data to SPSS for analysis quickly and easily. Qualtrics also allowed participants to access the questionnaire via their computer or their mobile phones in an easy to use manner, both pre and post-completion of the Inclusion and Diversity in Physical Activity unit block they were completing.

Data analysis

Quantitative data were analysed using SPSS software to compare the demographics variables of age and gender, and experiential variables of prior experience in working with people with

a disability and whether participants had previously any courses in Adapted PE, relative to their responses in to the *PEATID-11* questionnaire subscales of Normative beliefs, Behavioural beliefs, Control beliefs, Attitude, Intention, Subjective norm and Perceived behavioural control. Standard deviations and means were calculated for all specific variables (e.g., gender, age, etc). Specific inferential analyses were conducted in relation to pre and post-data and compare the variables considered in this phase of the research. The pre and post-questionnaire results were analysed using repeated measures t-tests to compare the pre and post-data, and p-values were calculated to determine the statistical significance of differences over time for each of the *PEATID-11* sub-scales. The dependent variable were looking for a change in the score and dependent on the efficacy of the unit. Comparisons using independent samples t-tests were made within the pre-test data in relation to gender, previous experience in an Adapted PE unit and previous experience in working with students with a disability to determine any statistically significant differences at pre-test for the demographic and experiential variables. Comparisons using independent samples t-tests were made within the post-test data in relation to gender, previous experience in an Adapted PE unit and previous experience in working with students with a disability to determine any statistically significant differences at post-test for the demographic and experiential variables.

Results

There were 122 first year undergraduate PE students who responded to the *PEATID-11* questionnaire. Of the 122 who completed the *PEATID-11* questionnaire only 29 completed both of the pre and post-unit versions. The sample of 29 participants who completed both the pre and post-questionnaire, demonstrated higher post-mean scores in each category indicating a more positive intent towards working with people with a disability. Results for the subscales of attitude and intention revealed significant differences between pre and post-test scores (see Table 4).

Table 4

Pre and post-unit overall scores

	Pre or Post	N	Mean	t	p
Normative beliefs	Pre	29	5.3621	-.996	.953
	Post	29	5.6103		
Behavioural beliefs	Pre	29	4.0460	-.227	.840
	Post	29	4.1178		
Control beliefs	Pre	29	4.5862	-.058	.908
	Post	29	4.5977		
Attitude	Pre	29	6.3793	-2.551	.005*
	Post	29	6.7931		
Intention	Pre	29	6.5345	-2.152	.015*
	Post	29	6.7931		
Subjective norm	Pre	29	6.4483	-1.222	.097
	Post	29	6.6724		
Perceived behavioural control	Pre	29	4.7069	-.502	.816
	Post	29	4.8190		

*Indicates significance ($p<.05$)

Pre and post-questionnaire results were also compared within each testing occurrence by gender using an independent samples t-test. Male undergraduate PE students demonstrated lower scores in the pre-unit questionnaire for the categories of attitude, intention and subjective norm. The comparison of post-unit questionnaire scores indicated no significant differences between males and females in any category (see Table 5).

Table 5

Undergraduate PE student gender pre and post-completion of the unit

		Pre-unit				Post-unit			
	Gender	N	Mean	t	p	N	Mean	t	p
Normative beliefs	Male	40	5.5925	1.964	.413	45	5.6822	1.102	.915
	Female	16	5.0813	1.821		17	5.4176	1.069	
Behavioural beliefs	Male	40	4.0792	1.525	.805	45	4.1630	1.826	.376
	Female	16	3.6198	1.541		17	3.6863	1.649	
Control beliefs	Male	40	4.5792	.910	.341	44	4.6061	.766	.732
	Female	16	4.4062	1.030		17	4.4510	.764	
Attitude	Male	40	6.3000	-2.082	.021*	45	6.5704	-.578	.893
	Female	16	6.7292	-2.863		17	6.6667	-.514	
Intention	Male	40	6.4750	-2.113	.001*	45	6.5778	-1.471	.111
	Female	16	6.7813	-2.822		17	6.7941	-1.626	
Subjective norm	Male	40	6.4000	-1.953	.011*	45	6.4333	-.703	.916
	Female	16	6.8125	-2.636		17	6.5882	-.595	
Perceived behavioural control	Male	40	4.7625	.506	.055	45	4.8278	.943	.061
	Female	16	4.6406	.448		17	4.6176	.824	

*Indicates significance ($p<.05$)

In addition, the results of independent samples t-tests conducted within each of the pre and post-test periods were used to compare participants who had previously not completed an Adapted PE courses/units to those who had completed an Adapted PE course (Table 6). There was no significance found in the pre-questionnaire data compared to the post-questionnaire

data; however, in most instances the data indicated there was an increase in the mean scores towards a more positive view of working with people with a disability post-completion of the unit.

Table 6

Previous adapted courses pre and post-completion of the unit

	Adapted PE courses	N	Mean	t	p	N	Mean	t	p
			Pre-unit				Post-unit		
Normative beliefs	Yes	25	5.5280	.572	.679	45	5.5422	-1.023	.495
	No	32	5.3906	.565		17	5.7882	-1.028	
Behavioural beliefs	Yes	25	4.0800	.920	.905	45	4.1000	.928	.296
	No	32	3.8281	.912		17	3.8529	.890	
Control beliefs	Yes	25	4.6800	1.693	.816	44	4.5720	.161	.808
	No	32	4.3958	1.696		17	4.5392	.159	
Attitude	Yes	25	6.5067	.686	.905	45	6.6222	.557	.430
	No	32	6.3750	.697		17	6.5294	.663	
Intention	Yes	25	6.6200	.656	.835	45	6.6778	.999	.626
	No	32	6.5313	.657		17	6.5294	1.047	
Subjective norm	Yes	25	6.5000	-.239	.718	45	6.4778	.033	.192
	No	32	6.5469	-.241		17	6.4706	.041	
Perceived behavioural control	Yes	25	4.6100	-.944	.107	45	5.5422	1.411	.601
	No	32	4.8125	-.915		17	5.7882	1.335	

*Indicates significance ($p<.05$)

The results of independent samples t-tests conducted within each of the pre and post-test periods were used to compare participants' *PEATID-11* questionnaire results using the variable of whether they reported having had previous experience in working with people with a disability. It was found that there was a significant difference within the pre-test questionnaire

data in relation to behavioural beliefs compared to post-test results which showed no significant differences for any of the *PEATID-11* questionnaire variables. Undergraduate PE students, whether they had completed a previous Adapted PE course or not, all showed a trend towards better outcomes in all of the *PEATID-11* variables. Additionally, all post-unit questionnaire data indicated there was a positive trend towards working with people with a disability as the mean scores for all post-test variables were higher than at pre-test (see Table 7).

Table 7

Previous experience with working with people with a disability pre and post-unit

	Disability Experiences	N	Mean	t	p	N	Mean	t	p
			Pre-unit				Post-unit		
Normative	Yes	30	5.7267	2.572	.466	51	5.5235	1.758	.259
beliefs	No	27	5.1444	2.555		11	6.0091	-1.709	
Behavioural	Yes	30	4.3833	3.863	.011*	51	4.0278	-.081	.309
beliefs	No	27	3.4444	3.950		11	4.0530	-.066	
Control	Yes	30	4.7111	2.480	.852	50	4.5500	-.300	.864
beliefs	No	27	4.3086	2.467		11	4.6212	-.291	
Attitude	Yes	30	6.6556	2.603	.207	51	6.5817	-.436	.149
	No	27	6.1852	2.544		11	6.6667	-.578	
Intention	Yes	30	6.7500	3.042	.295	51	6.6176	-.629	.281
	No	27	6.3704	3.015		11	6.7273	-.755	
Subjective	Yes	30	6.6833	1.747	.191	51	6.5000	.529	.557
norm	No	27	6.3519	1.730		11	6.3636	.677	
Perceived	Yes	30	4.8333	1.089	.365	51	4.8088	.836	.462
behavioural	No	27	4.6019	1.091		11	4.5909	.798	
control									

*Indicates significance ($p<.05$)

The *PEATID-11* questionnaire also comprised one open-ended question that asked the undergraduate PE students to comment on what general accommodations they would employ when working with people with a disability. Table 8 indicates responses collected as a part of

the *PEATID-11* questionnaire prior to the unit and Table 9 indicates the responses collected post-completion of the unit.

Table 8

Undergraduate PE student responses to the open-ended question on the pre-questionnaire*:* 'What general accommodations would you employ when working with people with a disability?'

Student	Response
1	Modifications of games
2	If this is to Hannah, I would make sure that due to having ADHD, the PE class would be more involving with less time, just sitting around and talking
3	None
4	Grouping them with similar skill level. Giving them an individual goal during games and drills. Setting clear rules before the start of session
5	Just ensuring that activities can be done by all no matter what level or ability
6	I would obtain a background on the student, e.g.: condition etc... 2. If applicable, modify my wording to enhance comprehension. 3. Make modifications to my lesson plans so the student in question will be able to participate. 4. Obtain (order if necessary) equipment for the student to use so they can participate. 5. Request feedback from classroom teachers and parents about my classes for the student and make changes if needed.
7	Modify activities but still make them fun and enjoyable
8	Modification to activity and more simplistic instructions
9	Assistant teachers to help with the class
10	Inclusive activities so that everyone can participate
11	Friends with younger siblings, also teaching at a disabled school as a volunteer
12	I would try make sure the kids keep moving. If Hannah wants to help me demonstrate I [sic] would let her
13	Changing teaching style, the environment, the rules and the equipment in order for the child/children to get the most out of their learning experience and allow them to have fun
14	Avoid making them feel different, but obviously accommodate to their needs if they're falling behind to support them

15	Focusing on the child to ensure they are participating and being included in all activities
16	modified game
17	So when it was the turn for Hannah to have a go at the activity I would modify the goal for them so they are to have a bit of success at the game but still give them a challenge so they are still learning
18	N/A
19	Skill level, intensity level
20	Be adaptable
21	Try keep them engaged so they don't get distracted
22	General modifications to the activities
23	Descriptive demonstration
24	Starting basic and working your way up
25	I would make different games that everyone can play so everyone is included in the one activity so no one felt left out
26	I would ask a lot of questions about what sports they enjoy or any other things they enjoy and make sure to modify activities to suit their need
27	Keeping them engaged in the activities and on task
28	More attention/mindful to those with a disability, while still treating them similarly to everyone

As part of the *PEATID-11* questionnaire, the undergraduate PE students were asked one open-ended question: 'What General Accommodations Would You Employ When Working with People with a Disability?' The pre-unit questionnaire recorded 26 open-ended question responses out of the 56 respondents who completed the questionnaire. The responses indicated that 82% of undergraduate PE students had a good understanding of inclusion and inclusive practices at the commencement of their studies. Of the 26 responses in this pre-questionnaire, 60% of respondents made reference to modifying activities to be more inclusive, as a way to accommodate Hannah, the student with a disability in the vignette. Respondent 25 in the open-

ended questions responses indicated: ‘I would make different games that everyone can play so everyone is included in the one activity so no one felt left out.

The other 40% of responses detailed answers that involved keeping the students engaged, on task, and giving the students with a disability attention while treating them like all the other students. This again indicates that the undergraduate PE students were thinking of ways to be inclusive before the commencement of the unit, which is in line with the findings of this research (also see Table 4).

One respondent suggested that a teaching assistant be present in the class to assist with the student with a disability, and another respondent suggested streaming of students into skill level groupings. The responses were positive in nature and aimed to be supportive of making the experiences for the students with a disability; however, these two respondents did not indicate changes they would make as an instructor.

The responses in Table 9 were collected at the post-completion of the Inclusion and Diversity in Physical Activity unit as part of the *PEATID-11* questionnaire. There were 17 responses to the same open-ended question in the pre-unit questionnaire in this post-questionnaire data. All of the responses demonstrated that the undergraduate PE students would exercise inclusive behaviours. The responses in this post-unit data collection were more specific about what the undergraduate PE students would employ as strategies to include Hannah in their physical activity classes. Respondent 9 stated they would include Hannah by ‘…making instructions simple for the students and getting straight into the activities’, while Respondent 11 detailed that they would ‘incorporate patience and time management to the activities to ensure the activity is completed before moving on’.

Table 9

Undergraduate PE student responses to the open-ended question on the post-questionnaire: *'What general accommodations would you employ when working with people with a disability?'*

Student	Response
1	Enjoyment
2	TREE, CHANGE IT
3	Inclusion and diversity course and aquatics and athletic movements
4	Making sure everyone is included
5	Adapt general instructions
6	TREE model
7	Being patient and very positive
8	Clear instructions
9	Making instructions simple for the students and getting straight into the activities
10	Keep the explanations short and use someone like Hannah for examples
11	I would adjust my class to suite what the individual was able to do, everyone should be able to participate no matter their disability
12	I would employ activities to suit their needs
13	Incorporated patience and time management to the activities to ensure the activity is completed before moving on
14	Change to make it more inclusive
15	Make sure activities are easily adaptable
16	I would make the class friendly for everyone to participate so no one is left out
17	Make sure I umpire fairly and explain to Hannah if she makes a mistake

Additionally, other respondents made reference to specific content and pedagogical details they would employ to be more inclusive. Respondent 6 detailed that they would employ the 'TREE' method of modification, while Respondent 1 detailed they would employ the 'TREE and CHANGE IT approach to modifying physical activity. These acronyms were part of the content delivered in the Inclusion and Diversity in Physical Activity unit as ways to approach modifying a physical activity. Respondents also made reference to the need to be patient, give

clear instructions, modifying activities and making instructions simple to accommodate students with disabilities to be involved in physical activities.

Discussion

Results of this phase of the study showed that participants demonstrated more favourable attitudes and intentions towards working with people with a disability after completion of the Inclusion and Diversity in Physical Activity unit (Adapted PE unit). This is of particular note as previous research has clearly indicated that PE teachers' beliefs and attitudes do vary in regards to teaching students with a disability (Hutzler et al., 2019). The results also demonstrated that while all participants showed more favourable attitudes at the completion of the unit, males were able to show more favourable improvements in the areas of attitude, intention and subjective norm. This result indicates that participation in this unit has greater benefits for male students. While no significance was found when comparing students who had previously completed an Adapted PE course (See Table 6), there was a significant change in behavioural beliefs in those students who had previous experience with students with a disability (See Table 7).

Participants more positive at the conclusion of the unit

The first major finding of this phase of the study was that participants had more favourable intentions and attitudes towards working with people with a disability at the completion of the unit. Attitude and intention were two of the subscales of the questionnaire data that showed significance differences between the pre and post test data (See Table 4). Attitude and intention, according to Ajzen (1991), are the predictors of behaviours. More favourable attitudes and intentions therefore indicate that behaviours will be more inclusive. This study has shown that this educational experience has produced more favourable attitudes and intentions in participants. This finding is consistent with previous research that has indicated that pre-service

teachers that are given access to high quality inclusive PE units will demonstrate more favourable attitudes and intention towards people with a disability. (Block & Rizzo, 1995; Ellis et al., 2012; Kowalski & Rizzo, 1996; Oh et al., 2010; Pedersen et al., 2014; Rizzo & Kirkendall, 1995; Schoffstall & Ackerman, 2007).

Equally important to note was that all the participants showed more favourable responses to the post completion questionnaire, indicating that they all had experiences that created a more favourable response to working with people with a disability (see Table 4). This finding is important as previous studies involving PE teachers have also indicated that they often feel under-prepared and ill-equipped to include students with a disability in their physical education classrooms due to lack of experience, lack of pre-service education training and lack of appropriate equipment (Hodge et al., 2004; Obrusnikova, 2008; Özer et al., 2013; Vickerman & Coates, 2009).

The reported improvement in attitude and intentions, in association with more favourable results in all other subscales supports the need for the incorporation of an Adapted PE unit in university undergraduate PE degrees to foster more favourable behaviours towards inclusion (See Table 4). A change in attitude is critical to the success of embedding inclusion and teacher ability to promote inclusion (Avramidis et al., 2000; DePauw & Doll-Tepper, 2000). Therefore a unit that promotes a positive attitude change towards inclusive behaviours is vital to making this adjustment a reality. Consistent with this, the current research is in line with other research that has demonstrated that increased experience and education in inclusive education creates PE teachers with more favourable attitudes and intentions towards working with people with a disability (Hodge & Jansma, 2000; Shevlin et al., 2013; Tindall et al., 2015). Additionally, Folsom-Meek and Rizzo (2002) found that attitude plays a major role in how PE teachers work with students with a disability. Overall, a more positive attitude will produce an increase in positive outcomes due to the implementation of inclusive practices. PE teachers who

demonstrate a positive approach to inclusion will in turn be more inclusive, especially when their pre-service training includes opportunities for 'real-life' situations that foster confidence (Morley et al., 2005; Vickerman & Coates, 2009).

The results demonstrated that at the completion of the unit, the undergraduate PE students showed a significant improvement in attitude and intention towards working with students with a disability (See Table 4). Completing the unit and participation in the accompanying practical experiences were contributory to a favourable progression in attitude and intention for the undergraduate PE student participants. This improvement highlights that these future PE teachers should be more positive towards working with students with a disability (Hodge et al., 2009a). As PE teachers beliefs will influence practice (Hodge et al., 2004) and the unit aims to provide students with the skills, knowledge and confidence to engage in teaching students with a disability, this is particularly important. The improvement in attitude and intention in this phase of the research is supported by previous studies that utilised the PEATID or *PEATID-11* questionnaire (Block & Rizzo, 1995; Ellis et al., 2012; Kowalski & Rizzo, 1996; Oh et al., 2010; Pedersen et al., 2014; Rizzo & Kirkendall, 1995; Schoffstall & Ackerman, 2007) where it was typically reported that students participating in inclusive PE undergraduate courses showed improvement in attitudes and beliefs towards working with students with a disability.

Research that incorporated other approaches of pre and post-attitude measurement, for example, the Attitude Towards Disability Persons (ATDP) scale (Yuker, 1970), reported that attitudes can be positively influenced through participation in an Adapted PE program (Di Nardo et al., 2014; Gürsel, 2007; Lieberman & Wilson, 2005; Tindall et al., 2015). The current research has supported these previous findings, as it has shown that participation in an Adapted PE course does result in the fostering of positive attitudes and beliefs for participating students.

The study aimed to build on research that has examined if pre-service teacher instruction within tertiary institutions affects attitude and intention (Obrusníková et al., 2003) Clearly in this

study, it was identified that an Adapted PE unit or unit such as the Inclusion and Diversity in Physical Activity unit, can support undergraduate PE students to formulate and adopt favourable behaviours towards inclusion (See Table 4). Many other studies looked to evaluate the type of experiences that provided the best outcomes for students (Block et al., 2013) and how the type of experience contributed to the self-efficacy of the students. Block et al. (2013) and Pedersen et al. (2014) have indicated that exploration of the type of experiences that pre-service PE teachers have in an Adapted PE unit should be examined to ascertain the best approach to achieve the positive outcome. In many cases, a greater number of positive results were found when there was a combination of both theoretical knowledge and practical experiences involving people with a disability as was found in the results of this study and supported by others (Apache & Rizzo, 2005; Coates, 2012; Di Nardo et al., 2014; Martin & Kudláček, 2010; Pedersen et al., 2014; Perlman & Piletic, 2012; Schoffstall & Ackerman, 2007; Tindall et al., 2015). A focus on the direct application of the theoretical and procedural knowledge was a key element in the design of the Inclusion and Diversity in Physical Activity unit content that was the focus of this study.

Students' pre-commencement attitude levels

Of particular note was that undergraduate PE student beliefs were generally positive to begin with (See Table 4). It is also interesting to note that despite the already positive mean scores to begin with, the undergraduate PE students showed more favourable responses at the completion of the unit. This indicates that the experiences they have participated in, resulted in some further positive changes in their beliefs. This important finding supports the work of many researchers (Block & Rizzo, 1995; Hodge & Jansma, 2000; Hodge et al., 2002; Kowalski & Rizzo, 1996) and indicates that preservice PE teachers that engage in an Adapted PE unit that is comprehensive of knowledge and practical experience can produce students who have more favourable attitudes towards working with people with a disability.

Positive attitudes and intentions prior to the commencement of an Adapted PE unit is also consistent with other studies of pre-service PE teachers (Martin & Kudláček, 2010; Obrusnikova, 2008; Yellin et al., 2003) who detailed that students undertaking PE courses may already have a positive attitude towards working with students and that the Adapted PE unit experience can only improve behaviours and beliefs. More positive attitudes may also be attributed to other factors such as previous experience or having taken previous Adapted PE courses (Block & Rizzo, 1995; Dias & Cadime, 2016; Pedersen et al., 2014; Rizzo & Vispoel, 1991; Rizzo & Kirkendall, 1995). Many of the undergraduate PE students in this study, had participated in an Aquatics and Athletics unit in their first semester of study where they were able to work with students newly arrived to the country and, in some cases students with a disability, and this may have attributed to their positive attitude.

These findings are important in providing a rationale for the curriculum for pre-service PE teachers to include an inclusion and diversity program in their courses as they demonstrate that completing a practical unit will impact positively on the attitudes of the pre-service PE teachers. (Oh et al., 2010; April Tripp et al., 2007). It is also heartening for those working with pre-service teachers and undergraduate PE students to know that these future teachers have this positive approach and that this positive approach will lead to a more inclusive PE workforce in the future.

Gender difference in attitudes

This study found that males had a less positive view of working with students with a disability compared with the females in the group at the pre-test evaluation (See Table 5). The majority of scores for both males and females increased post completion of the unit, with males showing a marked improvements in attitude, intention and subjective norm. This is in line with previous research that reported that male students showed more favourable attitude and intentions post

involvement in an Adapted PE unit (Aloia et al., 1980; Avramidis et al., 2000; Block & Obrusnikova, 2007; Boyle et al., 2013; Downs & Williams, 1994; Hutzler, 2003; Kalyvas et al., 2011). Female undergraduate PE students in this study also demonstrated more favourable approaches at the completion of the unit, indicating that participation in the unit had a positive effect on both male and female undergraduate PE students, while the males demonstrated greater change.

Positive attitudinal change patterns were also observed in several health care studies where the attitudes of males initially were less favourable to people with a disability (Devkota et al., 2017; Hergenrather & Rhodes, 2007; Seo & Chen, 2009). What is important to note is that at the completion of the unit there was no significant differences between gender, indicating that the males in the group were influenced by the learnings and experiences of undertaking the unit in a positive way. This is important to understand when developing undergraduate PE courses as this will enable the male undergraduate PE students to have a better understanding of inclusion and better prepare them to teach inclusively once they complete their course. To this end, it appears that male undergraduate PE students and pre-service teachers will benefit from his type of unit where practical experiences and disability-oriented theoretical knowledge challenge some of the norms and give rise to new confidence, skills and abilities in this important area.

In contrast to this, there have been several studies that found that there was no difference in attitudes between male and female pre-service teachers in regards to their attitudes towards working with students with a disability (Hodge & Elliott, 2013; Rizzo & Vispoel, 1991; Rizzo & Wright, 1988). While there is no definitive reason as to why this is the case, the most important finding is that participation in an Adapted unit, results in a more favourable response to working with students with a disability post completions of the unit, despite the gender of the participant.

Students with previous experience with disability

The resultant data for this research found that undergraduate PE students with experience in working with students with a disability indicated that a lower score for behavioural beliefs than those students who had no experience prior to the completion of the unit. This was consistent with previous research where it was found that students who had previous experience with people with a disability did not always have positive experiences (Hardin, 2005; Hutzler & Levi, 2008; Yellin et al., 2003). Yellin et al. (2003) found that having experience with students with a disability did not always produce a positive effect, but rather it is the quality of that experience that may contribute to the development of more favourable attitudes. This finding by Yellin et al. (2003) was in contrast to other research that indicated that those individuals with experience were more likely to be more positive towards working with people with a disability (Oh et al., 2010) due to higher perceived competence in their teaching ability.

Of significance was that at post-completion of the unit, there was no difference in scores for behavioural beliefs for those students with or without experience. This indicates that the coursework and experiences in which the undergraduate PE students engaged relates to a more favourable attitudes at the completion of the program of studies (Block & Rizzo, 1995; Folsom-Meek & Rizzo, 2002; Hodge et al., 2002; Oh et al., 2010; Rizzo & Kirkendall, 1995). As behavioural beliefs are based on the probability that behaviour will produce a given experience of outcome (Ajzen, 1985) this could be attributed to certain expectations held by those individual undergraduate PE students that were challenged by the experiences in the unit and produced a more positive response at the completion of the unit.

Several studies have indicated that those students who had experience with working with people with a disability will have more positive attitudes (Brownlee & Carrington, 2000; Hastings, 1996) and that a structured approach to the experience will provide for a more positive attitude. The typical finding was that pre-service teachers who have had contact with

students with a disability are more generally more positive (Avramidis et al., 2000; Brownlee & Carrington, 2000; Folsom-Meek & Rizzo, 2002; Young et al., 2013). This may also be due to the contact theory (Allport, 1954) which suggests that the effect of contact with a person with a disability is related to the amount and type of contact a person has had with a person with a disability. Contact theory has been used to explain positive attitudinal change in other studies involving pre-service teachers and disability (McKay, 2018; McKay et al., 2017; Petkova et al., 2012).

In a study by Mc Kay et al. (2017), all of the participating undergraduate PE students and pre-service PE teachers who took part in the planning and facilitating of a Paralympian experience showed a considerably positive change in attitude towards people with a disability. The undergraduate PE students participating in this unit, had experience running a 'sports day' at a local special school as well as the weekly planned physical activity sessions with local special school students. This has often been a highlight for the undergraduate PE students of the Inclusion and Diversity in Physical Activity unit.

Özer et al. (2013) indicates that while the contact theory may in fact, be a contributing factor, pre –service teachers with more positive attitudes may be more prepared to work with students with a disability due to their positive nature and approach. This was also found to be the case in research by McKay et al. (2015) where it was found that positive experiences with people with a disability took already 'good' attitudes, to 'great' attitudes towards people with a disability.

Students with previous Adapted PE experience

Results indicated that students who had reported having undertaking previous Adapted PE course showed significant improvement in their behavioural beliefs at the completion of the unit (See Table 6). This is important to highlight as again, it shows that positive change had

occurred due to the experiences had within the unit. Behavioural beliefs is a component of the TPB. Behavioural beliefs held by an individual is said to contribute to their attitude towards behaviour, their intention and lastly their behaviour (Ajzen, 1985). Undergraduate PE students who reported having undertaken an Adapted PE course previously may have believed they understood and knew what to do to work with students with a disability and may have found that they in fact had much to learn. Zanandrea and Rizzo (1998) found that students who had previous experience that involved a 'hands on' experience 'felt they had a degree of competence when working with people with a disability. This is supported by multiple studies that investigated whether exposure to people with a disability did in fact have create positive change in those who had contact with people with a disability (Hutzler & Sherrill, 2007; Liu et al., 2010; McKay et al., 2015). This study showed that more favourable attitudes and intentions were found at the completion of the unit, indicating that the delivery and content of the unit created an opportunity for change within the undergraduate PE students. Contact theory (Allport, 1954) may have also played a role in the change in behavioural beliefs and an improved and more favourable attitude towards working with people with a disability at the conclusion of the unit.

This perceived competence and confidence may have been challenged in this highly interactive experience where the undergraduate PE students worked directly with students from special schools. Undergraduate PE students who had previously undertaken an Adapted PE unit may have initially felt that they understood the expectations of the unit and were familiar with practical experiences of the unit. At the conclusion of the unit these undergraduate PE students also reported more favourable behavioural beliefs, indicating that some further change had taken place and they had more favourable attitudes towards working with students with a disability. One reason could be that the students used their prior knowledge of Adapted PE

program in combination with their new found knowledge and practical experiences to find a more positive and more favourable attitude towards this type of work.

All undergraduate PE students whether reporting having taken previous Adapted PE courses, or not, did show an improvement in mean scores towards being more positive at the completion of the unit. As indicated most undergraduate PE students were positive in attitude towards working with people with a disability, particularly post the unit, and this is supported by research that indicates that exposure to people with a disability, will in fact, create opportunity for more positive attitudes towards people with a disability (Hutzler & Sherrill, 2007; Liu et al., 2010; McKay, 2013, 2018; McKay et al., 2015; McKay et al., 2017).

Open-ended questionnaire data discussion

The open-ended questionnaire data collected pre and post-unit within the *PEATID-11* questionnaire has supported findings made in this research. This research found that the surveyed undergraduate PE students were generally positive about inclusion to begin with (See Table 4), which is consistent with other inclusive PE research (Martin & Kudláček, 2010; Obrusnikova, 2008; Pedersen et al., 2014; Yellin et al., 2003). The respondents identified that they were willing to be inclusive of Hannah and would make accommodations to include her. Respondent 7 said they would 'modify activities but still make them fun and enjoyable', indicating a desire to be inclusive of Hannah and provide opportunity for her to be involved in the physical activities. Respondent 5 indicated that they would 'ensure that activities can be done by all no matter what level or ability.' This suggests that this undergraduate PE student was already thinking about how they would modify activities to be more inclusive.

It is positive to see that the undergraduate PE students began the unit with an encouraging view towards being inclusive towards students with a disability. What is also pleasing to see is that at the completion of the unit, as evidenced by the *PEATID-11* data results in this research, that

undergraduate PE students developed more favourable attitudes towards students with a disability.

In regards to the open-ended question responses at the completion of the unit, the responses were more specific to some of the content that was delivered in the unit. Respondent 6 stated: 'I would use the TREE model.' The TREE acronym stands for Teaching styles, Rules, Equipment and Environment. TREE is an approach to modifying physical activity that is adopted by many Australian sports including Sport Australia (Australian Sports Commission, 2021). Respondent 6 mentioned CHANGE IT as a way of modifying sporting activities. CHANGE IT is also an acronym used to support modifying activities to be more inclusive. CHANGE IT stands for Coaching style, How you score, Area, Number of players, Game rules, Equipment, Intensity and Time (The Inclusion Club, 2017). This approach to modification of physical activities was also a part of the content delivered in the Inclusion and Diversity in Physical Activity unit (Inclusive Sport Design, 2020). The premise is to give undergraduate PE students an easy way to remember how they can modify activities to be inclusive of all students.

Again, as was the case with the pre-unit responses, in the post-unit responses to the open-ended question it was apparent that the undergraduate PE students were prepared to make changes to the way they would present physical activities with the view to being inclusive. These positive responses to the open-ended questions support the quantitative findings in this research that undergraduate PE students have more favourable attitudes towards inclusion at the completion of coursework and practical experiences with students with a disability. The responses that the undergraduate PE students gave in regards to the way they would interact with students with a disability in this research, are in line with previous research that has demonstrated similar results post-completion of an inclusive PE unit (Block & Rizzo, 1995; Hodge & Jansma, 1999; Kowalski & Rizzo, 1996). Additionally, the open-ended questionnaire responses showed that

the undergraduate PE students were able to process content and apply it to their practice when working with the students with a disability.

Summary

Phase 1 of the study reinforces the findings of existing research that indicates the importance of including an inclusive PE unit in an undergraduate PE course. Many studies, international (Block & Rizzo, 1995; Obrusnikova, 2008; Oh et al., 2010; Rizzo, 1984; Rizzo & Kirkendall, 1995; So et al., 2008) and Australian (Carroll et al., 2003; Martin & Kudláček, 2010; Pedersen et al., 2014) have indicated that the inclusion of a 'hands on' practical approach to the unit will also produce a more favourable attitudes and intentions towards working with people with a disability.

The results of the data derived from the students completion of the *PEATID-11* questionnaire demonstrated that participation in the Inclusion and Diversity in Physical Activity unit, in sports days and in delivery of practical sessions with special schools students, combined with relevant were an excellent combination of experiences, will create more favourable positive attitudes towards working with people with a disability in physical activity settings. The results, using a variety of demographic filters, indicated that participation in this unit had positive and favourable responses by the undergraduate PE students towards working with people with a disability in physical activity settings. This finding is important as more favourable attitudes towards people with a disability will in turn, produce PE teachers who are more inclusive in their classes (Avramidis et al., 2000; DePauw & Doll-Tepper, 2000).

The findings of this research that indicates that there is a need for more practical 'hands on' inclusive PE learning opportunities in undergraduate courses (Morley et al., 2005; Tindall et al., 2015). As the current undergraduate PE student cohort participated in a 'hands on' unit where there was a mix of theoretical and practical content, with a strong emphasis on an applied

component, the positive results regarding favourable attitudes post completion of the unit reinforce that the unit design contributed to the development of positive attitudes. The Inclusion and Diversity in Physical Activity Unit is taught at first year, and examines all facets of inclusion and diversity with a specific focus on practical experience in working with students with a disability in a physical activity setting. This is achieved by visits to local special schools, organising sports days at special schools and planning and delivering inclusive physical activity sessions for visiting special school students. The undergraduate PE students were able to use the content and knowledge they gained in the unit to apply to their experiences with the students with a disability. The premise of this unit and its development is to empower the undergraduate PE students and give them confidence and skills to create an inclusive teaching environment.

.Chapter 5 – Phase 2 of the research

Introduction to Phase 2 – Qualitative Focus Groups

This chapter outlines the method, results and discussion of results for Phase 2 of the research. The chapter presents specific detail regarding the participants, focus group interview procedure and the techniques used in the focus group analysis and results. Information outlining the relationship between the main research questions and the second research phase sub-aim of: 'Exploring how students have grown and changed as a result of participating in the Inclusion and Diversity in Physical Activity unit' and 'to consider the "lived experience" of students' engagement with the Inclusion and Diversity in Physical Activity unit'. Phase 2 of the research involved a series of undergraduate PE student focus groups. Three focus groups were conducted with undergraduate PE students who had volunteered to be interviewed at the completion of the Inclusion and Diversity in Physical Activity unit.

Relationship between the research questions and Phase 2 of the research

As discussed in the previous chapter, the research project has been designed using a mixed method triangulation approach. While the first phase of the research adopted a quantitative approach through a collection of questionnaire data, the second phase of the research was designed to examine through the collection of qualitative data, the 'lived experience' of the undergraduate PE students at the completion of the Inclusion and Diversity in Physical Activity unit. The importance of this second phase of the research is to understand 'what' undergraduate PE students experienced when learning about, working with, visiting and planning physical activity sessions for people with a disability in their own words. This second phase was designed to add to the current body of knowledge as most previous attitudinal studies pre and post-completion of an Adapted PE unit have focused on quantitative analyses, using questionnaires or meta-analysis reviews (Case et al., 2020).

A focus group data collection method was chosen in the current research, as focus groups allow for insights into what the undergraduate PE students are thinking and also allows for a deep understanding of the 'lived experience' in working with students with a disability in a physical activity setting (Nagle & Williams, 2013). To further explore the benefits and challenges of undergraduate PE students participating in an Adapted PE unit or training, Phase 2 uses the undergraduate PE students' own voices to better understand their experiences and to explore the benefits of the inclusion of this unit in the development of attitudes, skills and confidence in this area. By interviewing the undergraduate PE students, the experiences they have will be examined and provide an opportunity to look at change through a richness of their own spoken words.

This second phase of the research addresses the overarching research aim: 'To examine the undergraduate PE student learnings through engaging in the Inclusion and Diversity in Physical Activity unit', as well as two sub-aims:

Sub-aim 2

To evaluate how students have grown and changed as a result of participating in the Inclusion and Diversity in Physical Activity unit

Sub-aim 3

To examine the 'lived experience' of students' engagement with the Inclusion and Diversity in Physical Activity unit

This second phase data is compared and contrasted with the results of Phase 1 quantitative results and with the results of the industry interviews in Phase 3.

Method

Participants

A total of 22 undergraduate PE students were involved in the focus groups. The students were all in the first year of their undergraduate degree in the Bachelor of Physical Education and Sport Science. All had all recently completed the Inclusion and Diversity in Physical Activity unit. Three separate focus groups were conducted on three separate days. There was a higher proportion of male participants than female participants in the focus group sessions (see Table 10). As reported in Chapter 3, this reflected there being more males than females enrolled in the Bachelor of Physical Education and Sport Science course.

Table 10

Undergraduate PE student focus group gender analysis

Focus group	Female	Male	Total
1	2	5	7
2	3	3	6
3	2	7	9
Total			22

Instrument

Six focus group questions were developed that asked the undergraduate PE students to reflect upon the skills they believed they had acquired, things they had learned about themselves through the teaching experience, the importance (or lack of) of what they had learned, whether the teaching experience has prepared them for teaching participants with a disability in the future and any lightbulb moment they had during the experience. These questions were

developed to ascertain what undergraduate PE students found out about themselves after having completed the practical 'hands on' physical activity sessions with people with a disability. These questions were designed in consultation with the research team and were revised several times to ensure they reflected the intentions of the sub-aims.

The following questions were asked in each focus group session:

Undergraduate PE student focus group questions

1. You have just completed three sessions of working with students with a disability. Reflecting on this, what are three things you learned?
2. Again reflecting on your experiences, can you name three things you learned *about yourself* during the experience?
3. What was your lightbulb moment? Why?
4. How important do you think this experience will be when you are teaching?
5. Can you identify any skills you learned during this experience?
6. Do you feel that working with students with a disability in this setting will prepare you for when or if you have a child with a disability in a mainstream class?

Focus group interview procedure

Undergraduate PE students were recruited by an initial email (see Appendix 2) and then followed up with those who registered their interest in being involved in the interviews. Facilitators teaching into the unit also reminded the undergraduate PE students of the request for focus group participants in classes. The most challenging part of this process was finding a time that was suitable to have the students attend that did not clash with their classes or other life commitments. The undergraduate PE students were also informed that they would have refreshments at the completion of the session to thank them for their participation and time.

The undergraduate PE student focus groups sessions were conducted over three separate days in November 2019 at the inner Western Melbourne's university where these undergraduate PE students were enrolled, at two of its campuses. Each focus group session was recorded, with permission, and the recordings were carefully transcribed into a word document in early 2020.

Undergraduate PE students were welcomed into the room and asked to sit at a table where two recording devices were placed. An iPhone and a portable recording device were used to record the interviews for later transcription and thematic analysis. Participants were asked to read and then sign a permission form (see Appendix 3). Once all of the undergraduate PE students had completed the form, the researcher set out the guidelines for participation in the focus group and other expectations.

Guidelines for the focus groups were as follows:

1. Only one person at a time to speak
2. Speak loudly and clearly
3. Answer as truthfully as you can
4. Everyone is to be respectful of each other's responses
5. What is said during the focus group is private and should not be discussed outside of this arena.
6. If you do not wish to answer a question then please indicate this

The interviewer then asked the six questions and went around the table having each participant respond. Each undergraduate PE student had the opportunity to respond to the question or ask for clarification. All undergraduate PE students participated fully and were fully engaged taking turns to answer the questions.

Data analysis

A thematic analysis was undertaken of all three focus group transcripts. Each of the three focus groups recordings were transcribed into a word document to be thematically analysed and to look for commonalities or stand-out comments made by the undergraduate PE students in relation to their experiences. The transcriptions was completed by an external transcription company and the transcripts were then read by the primary researcher and the research team for validity and accuracy. The analysis allowed for identification of patterns of themes that were evident in the focus group transcripts and were then related back to the research questions (Braun & Clarke, 2006, 2019). To begin this thematic analysis, a structured approach was adopted to ensure that all data were organised and analysed in detail. While there is no clear procedure on how a researcher should go about conducting a thematic analysis (Attride-Stirling, 2001; Braun & Clarke, 2019; Tuckett, 2005), it can be argued that many types of analysis are in fact thematic in nature.

For the purpose of this research the thematic analysis was completed using a six-step framework designed by Braun and Clarke (2006), using the following steps:

1. Become familiar with the data
2. Generate codes
3. Search for common themes
4. Review themes
5. Define the themes
6. Write up the analysis

This approach was taken as a guide to the thematic analyses as when analysing data of this sort of research, the researcher may often have to move back and forth between the steps in order to understand complex data (Maguire & Delahunt, 2017). Each focus group transcript was read

three times with initial notes taken regarding the general themes indicated in the transcripts. At the end of this process, several ideas regarding codes and themes were formed. The primary researcher then conducted a thorough reading of each of the three transcripts and coded them according to the relevance to the research questions. The data were read and re-read and then read again to be completely immersed in the data (Ulin et al., 2005). The data were then coded using an open coding method which involved no pre-set codes but, rather, the codes were developed and modified as the focus group transcripts were worked through.

Coding the transcripts involved identifying and labelling sentences, words or phrases with similar meanings (Belotto, 2018; Graneheim & Lundman, 2004). Codes are essentially the elements that capture the essence of the data that are potentially related to the research questions (Clarke et al., 2015). A table was designed to condense the participants' comments and highlighted areas of text were used to begin the coding process. During this process it was imperative to examine the text and identify similarities across the breadth of participants. This process is important to provide credibility to the research. It is also important to portray an accurate representation of the focus group and participants to ensure credibility (Krefting, 1991; Thomas & Magilvy, 2011).

Once the primary researcher completed the thematic analyses, the themes were shared with the two independent researchers to ensure interrater reliability (Belotto, 2018; Clarke et al., 2015). Interrater reliability is important to establish rigour and confidence in the findings of the research (Belotto, 2018; Thomas & Magilvy, 2011). The two independent researchers carefully used the presented codes to analyse a selected focus group transcript and then meetings were set to discuss, debate and agree on a set of appropriate codes with a discriminant of approximately 80%. The discriminant is important as an aspect of the coding to be agreed upon and ratified. This process is in line with researchers such as Campbell et al. (2013) and Belotto

(2018). This process of discussion and debate around the coding was repeated until consensus was reached.

The three researchers then came together to establish interrater reliability through a consensus discussion. Using the colour-coded transcripts, the researchers agreed to the premise that if two of the researchers had identified the theme in the same way, that they would agree to the consensus after discussion. If all were in agreeance then the theme was overwhelmingly accepted and if there was differences in the classification of themes then each researcher put forth their case and a consensus was reached. Once all three focus group transcripts were analysed, they were examined to identify relevant themes relating to the research questions and any other stand-out revelations.

Results

The results of the three student focus groups were analysed to ascertain their 'lived experience' of participating in the Inclusion and Diversity in Physical Activity unit. The participant responses were categorised into themes based on the responses to six questions. Forty pages of transcribed transcript data were carefully analysed with the following results. Of the 61 responses analysed, only one was omitted due to irrelevance to the data collection. Of the 60 resultant responses there was an 80% agreeance between the researchers as to what theme was identified. The remaining 20% of the responses had two of the three researchers agree with the identified theme.

Using this method, five themes were identified after a thorough thematic analysis of the focus group transcripts. The themes that were identified are: improved knowledge of inclusion and diversity; personal growth as a facilitator or professional; perceived teaching competence; anxiety; and self-efficacy.

Improved knowledge of inclusion and diversity

This theme relates to the knowledge of disability as a whole and the experience of how to work with people with a disability. Data also showed that the student, through a better understanding of disability, is able to provide better experiences for the people with a disability. Improved knowledge of inclusion and diversity themes stood out strongly as 70% of participants made reference to a having a better understanding of disability and inclusion through the experience of working with students with a disability, as demonstrated by the comment below:

> Three things that I've learnt is that first of all, the disability's limitation, it's just a barrier that we have to work around. The second thing is to just have an open mind that everyone is different in their own ways, so see the person not the disability. And lastly, that as I guess future Phys Ed teachers, we should all be looking to include everyone within every activity and session (Respondent 1, Focus Group 2).

Additionally, there were comments that made reference to seeing the students with a disability as individuals and being able to focus on what they could do rather than what they were not able to do, '… the unit also taught us how to focus on the ability rather than the disability. Being able to see them as individuals' (Respondent 3, Focus Group 2).

Participants in the focus group also made comments about being more prepared to make modifications so that students with a disability could be included in activities. The respondents highlighted the importance of being capable of adapting activities to cater for a particular ability. This was reinforced by Respondent 2 in Focus Group 1, who stated that: 'We can just modify that, either add another element and so it's a little bit of a different game but it's still the same kind of idea.'

Participants also made comments about understanding that students with a disability were often more 'able' than they had anticipated and for some participants this was surprising. In all three

focus groups, 90% of participants' responses were positive about the experiences in the unit, in relation to their understanding of disability and inclusion.

Personal growth as a facilitator or professional

The second theme identified relates directly to the way an undergraduate PE student had perceived that they had grown and changed through this experience. Respondents articulated that they had a deeper understanding of themselves and their capabilities when working with students with a disability. This theme is characterised by responses such as: 'I think it [the experience] gives you an insight on how unpredictable kids are' (Respondent 2, Focus Group 3). Additionally, respondents also were able to reflect on their personal growth as a professional and how the experience would be useful in the future: 'I just think I've learnt things that have worked well and what hasn't worked well, so you can draw in that in the future if I was to have a student in the mainstream class (Respondent 1, Focus Group 3).

Patience and understanding were specific words that were used in all focus groups by 80% of the individual respondents. Patience, when working with students with a disability and the ability to persevere were highlighted in many responses. Also indicated as valuable was the understanding that this type of exposure to students with a disability was important to their growth as a facilitator or practitioner: 'to be exposed to them was just it was great. It's almost like what we needed early on. So you can get a taste for a few different things and I loved it' (Respondent 7, Focus Group 3). Also evident in the data analysis was the sense of reward and accomplishment that the respondents felt when working with the students with a disability.

> So I think throughout the session, I just enjoyed it more and personally I was getting really engaged and loving it because I didn't think I was gonna get that much reward out of it and I really did. It was only four sessions but I was like, 'This is pretty amazing.

‘I think internally, it was just enjoyment. I learnt that I can enjoy it as much as I could (Respondent 5, Focus Group 1).

Perceived teaching competence

The third theme to emerge from the data was that respondents who completed this unit had greater confidence in their ability to plan, prepare, teach and provide feedback in a teaching context at the completion of the unit. Overwhelmingly, 90% of respondents felt that this experience did give them confidence and a positive experience in relation to inclusive teaching skills.

> It’s very important but I think mainly it’s the practical side of it, like having the students come to us so we went to the school rather than just sitting in the classroom talking about strategies. This way we could implement them and as we’ve all said like the lesson plan is not necessarily gonna go how you want it and that thinking on your feet. So I think it’s just that small step between like learning about it in the classroom to than actually getting the opportunity to implement it. I mean I really think that’s just that key difference that will help you maybe get a job or work with students who have impairments rather than teacher who’s just learnt about it in the classroom (Respondent 2, Focus Group 1).

Additionally, 70% of respondents felt that the experience would hold them in good stead for when they were teaching in the future. Respondents felt that completing this unit and the practical sessions gave them experience so that when they were teaching in the future they would know what to do:

> … we’ve already had that prior experience now when we are in the field and we are teaching, there are students in our class that do have some disabilities that we are able

> to draw on these experiences, and what's worked well, and what hasn't worked well (Respondent 1, Focus Group 3).

Anxiety

The fourth theme identified in the data analysis was anxiety. This theme related to the anxiety experienced by a student who may have felt that they did not have, or will not develop the skills, confidence and/or experience to work with students with a disability. The anxiety respondents discussed related to several areas. One area discussed was around confidence and how respondents felt about working with students with a disability, as detailed by Respondent 6 in Focus Group 3: 'How can I teach them? I never learned how to teach them before.' Respondents were able to articulate the concern they felt for the students with a disability and their personal fears.

> I was really scared at the start. I had this, I don't know, this really weird fear in me even though I did a course before but I just figured this one will be harder but I guess like when we taught the sessions, it was easier 'cause we were much have been broken down whereas at the [school name withheld], I felt like I always would have a heart attack because someone just fell and all that (Respondent 8, Focus Group 2).

The other area of anxiety that was found was related to perceptions that the respondents did not have enough experience to feel really confident when working with students with a disability, and were concerned that the unit did not give them what they needed, as indicated by Respondent 2 in Focus Group 3:

> So I think that the subject was great. I just feel like I didn't do enough for it to actually give me all the skills and all the knowledge and readily prepare me to teach students like that in the future.

There was acknowledgement that the unit gave the respondents confidence but 25% of responses felt they still needed more skills in the area

> So I do think that it's given me the confidence but not all the skills that I need to teach special needs students in a mainstream class (Respondent 2, Focus Group 3).

Forty per cent of respondents indicated that there was not enough experience in the three sessions of practical classes and would like to have more practical experiences or units like this one in their degree. While 30% of respondents also indicated that they were not keen on the idea of working with students with a disability, and this was due to the respondents having concerns for the welfare of the students with a disability, as indicated by Respondent 6 in Focus Group 2:

> In the beginning, when I was told that I will have to teach children with disabilities, I wasn't all too keen about it. I was a bit nervous. It was just about I'll be in control of them like teaching them and then someone getting hurt, feel terrible about it.

Improved self-efficacy

This fifth and final theme that was identified through the thematic analysis was the undergraduate PE students' improvement in self-evaluation and confidence in their ability and belief in oneself. This was a very common theme with 90% of respondents indicating that they had greater confidence and belief in themselves in relation to working with students with a disability after completion of the unit. When reflecting on the unit, Respondent 4 from Focus Group 3 indicated that, 'going into that with full confidence and knowing what to expect', was a reassurance for them. Respondents indicated that the practical classes with the students with a disability combined with the unit allowed for them to find confidence in themselves and their ability to work with these students.

> I think this unit has helped us a lot, like it's given us tools not just for disabled kids but how we learn about transgender people or I wouldn't have known how to deal with that but this unit has helped us, make sure that everyone is included in what we teach and what we – so I feel like it's given us a lot of things that we can put in our toolbox, to use in the future, so I feel I've learnt a lot, yeah (Respondent 9, Focus group 2).

Results Summary

Transcripts were carefully analysed and were able to clearly identify through a vigorous and thorough thematic analysis that students had grown and changed as a part of their experience in the unit. Five themes were identified that will be interpreted and contrasted and compared with current and existing literature in the Discussion to follow.

Discussion

This second phase of the research was designed to explore the 'lived experiences' of students undertaking the Inclusion and Diversity in Physical Education unit. A further purpose of this phase of the study was to examine how the students perceive they have developed at the personal, academic and professional levels after participating in the unit of study. Exploring these concepts was achieved by a series of three focus groups where the facilitator posed a series of eight questions that aimed to address the two sub-aims: *To explore how students have grown and changed as a result of participating in the Inclusion and Diversity in Physical Activity unit*, and *to consider the 'lived experience' of students' engagement with the Inclusion and Diversity in Physical Activity unit.* The analysis of the interview data contributed to the development of the following themes: Improved knowledge of inclusion and diversity; Personal growth as a facilitator or professional; Perceived teaching competence; Anxiety; and Self-efficacy, which were interpreted, compared and contrasted with current and existing literature.

Improved knowledge of inclusion and diversity

All of the undergraduate PE students were able to articulate that participation in the unit, particularly being involved in the 'hands on' experiences, allowed them to gain a greater understanding of inclusion and disability. The Inclusion and Diversity in Physical Activity unit was designed to take a social model approach to disability and not a medical model of disability approach. By doing this, the unit content delivered was created to provide information and develop the skills for undergraduate PE students to see the whole person and not the disability. The premise of being able to ascertain what a student 'could' do rather than what they 'could not' do was introduced. Disability-specific teachings were not expected, but the consideration of modifications to activities to include all students and ensure participation were encouraged. These concepts were delivered in the classroom in a workshop-style but it was clear that the application of these learnings occurred in the 'hands on' practical experiences, and this was evident in the comments the undergraduate PE students made about their personal experiences.

Undergraduate PE students felt that the practical experiences were important to connect the theory and practice and reported feeling that they understood more about disability and inclusion prior to working with the students with a disability. This is in line with studies that showed that experiences with students with a disability showed greater understanding of disability and inclusion (Kowalski & Rizzo, 1996; Rizzo & Vispoel, 1991; Rizzo & Kirkendall, 1995; Tripp & Rizzo, 2006). Comments such as, 'Disability is a not a limitation but just a barrier to work around… See the person not the disability' (Respondent 1, Focus Group 2), demonstrate clearly how the undergraduate PE students understood and embraced the learning from the experiences. Undergraduate PE students began to action how they could include these students and implement modifications to activities to include them. The undergraduate PE students also expressed why they thought this knowledge was valuable to them, indicating it was 'really important because if you teach in a mainstream school you will always get a student

with a disability' (Respondent 3, Focus Group 3). These authentic learning experiences are seen to be important and have been the focus of many studies that show that 'hands on' practical experiences supported by theory are an important and effective way to learn about inclusion and diversity (Barber, 2018; Forlin & Chambers, 2011; Rust & Sinelnikov, 2010).

The undergraduate PE student cohort also experienced incursions with Wheelchair Basketball and ExSight Sports (Goalball) where they were introduced to modified sports and had direct experience as a person with a disability. This opportunity allowed for the undergraduate PE students to engage in new physical activity experiences and as a consequence acquire greater awareness of disability. This has been supported by Barber (2018) as a pivotal 'best practice' activity which helps students to understand ableism and disability. It is also clear that through the interviews the 'lived experiences' of the undergraduate PE students were capable of being shared and detailed, as they were able to describe the positive impact their experience in the unit had on them. The planned experiences gave them a greater understanding and knowledge of inclusion and diversity and, in their own words, the students were able to articulate the importance of these learnings as being, 'invaluable… it builds confidence and awareness' (Respondent 6, Focus Group 3)

Personal growth as a facilitator or professional

Growing as a facilitator and/or professional was the second theme identified through the data analysis. Undergraduate PE students were able to articulate, discuss and explain how they felt they have grown and changed as a result of the completing the inclusion and diversity unit. Undergraduate PE students used words like 'patience, realisation, excited, mindset', when discussing how they felt during and after the experiences. It was evident through the analysis of the transcript data that personal change had occurred and that undergraduate PE students understood the importance of what they had learned about working with students with a

disability. In particular the idea of being 'patient' was mentioned by 80% of respondents and can be characterised by the following comment by Respondent 7 in Focus Group 3: 'Working with kids with special needs, you just need to have that a little bit more [patience] and as my classes progress, I started to develop a little bit more.' There was a clear understanding that they had seen growth in themselves as a results of their experiences.

Additionally, respondents found the experience rewarding and enjoyable even though some respondents had expressed some anxiety initially when beginning the practical unit. Respondent 5 in Focus Group 3 indicated: 'I did not think I would enjoy myself as much as I did. I did not expect it to be so rewarding. I loved it. [I was] more engaged than I thought I would be.' There was a realisation that this experience could be something that they may pursue in the future as commented upon by Respondent 6 in Focus Group 3: 'After the teaching I was quite confident. If I had the chance [to work with students with a disability] I would jump at it.'

These findings are important as many studies have indicated that pre-service teachers or undergraduate PE students that have access to units on Adapted PE or inclusion and diversity are a factor in producing more favourable attitudes towards teaching students with a disability (Block & Rizzo, 1995; Hodge & Jansma, 2000; Hutzler et al., 2005; Obrusnikova, 2008; Oh et al., 2010; Pedersen et al., 2014). With undergraduate PE students recognising positive and favourable change in themselves as facilitators' post-completion of the unit, this indicates that the authentic experiences in the unit has provided a vehicle for that change to occur.

Perceived teaching competence

The third theme identified through the data analysis relates to perceived teaching competence. Having the experience of working 'hands on' with students with a disability, by planning and preparing a session plan, organising equipment and then reflecting on the experience was seen

as a valuable tool by the undergraduate PE students. Respondents were able to gain important adaptable teaching skills and confidence in working with the students with a disability as a comment from Respondent 1 in Focus Group 1 who described, 'being able to adapt lessons to be able to keep people engaged… and use good communication', as important skills to have. Another respondent made comment that the experience had 'solidified me wanting to be a teacher [as I] realised I would be a good teacher'. These insights are powerful as they demonstrate the power of the experience from the undergraduate PE student perspective.

While Barber (2018) suggests that first year students have little or no experience and therefore may not be able to draw on previous experiences about how they feel about teaching students with a disability, there is no doubt that these undergraduate PE students felt overall that they were more confident and competent with the experience. This finding is in line with many other studies that indicated that a well-designed combination of theory and practice will support students to be more confident and competent in their teaching, particularly with students with a disability (Block & Rizzo, 1995; Hutzler & Sherrill, 2007; Martin, 2011; McKay et al., 2017; Oh et al., 2010; Rizzo, 1984).

Anxiety

Anxiety in regards to working with students with a disability was the fourth theme identified through the data analysis. It was very clear that many students were anxious about working with students with a disability, and for some of these students it was the very first time they had done this. This common sentiment also may have been due to the first experience in teaching; however, most responses were able to demonstrate that the anxiety was due to the disability of the students rather than to it being their first time teaching. Respondent 7 in Focus Group 2 indicated that: 'This class helps you…I was scared but it has helped me to acknowledge SWD [students with a disability] and I am sure I can teach them'. Despite

experiencing some anxiety at the beginning of the practical involvement, many students were able to overcome this, as demonstrated by Respondent 6 in Focus Group 2: 'I was not too keen, I was nervous … after the teaching I was quite confident.' This was heartening as this is what the unit aimed to do. The aim of the unit was to expose students to these experiences to overcome any anxiety they may have had, and create an opportunity for more favourable attitudes towards students with a disability. As Barber (2018) also noted, the more undergraduate PE students worked with the students with a disability, the more comfortable they became. Some of the students, however, were able to articulate that while they felt they could teach students with a disability, they felt it was not something that they would choose to do as per the comment by Respondent 5 in Focus Group 3: 'I enjoyed it but [it was] not my preference.' This is not seen as a failure on the part of the experience but rather a self-realisation of the individual.

In line with this research, studies into pre-service teacher preparation in working with students with a disability have found that most students feel less anxious after having participated in an inclusion program such as this (Everhart, 2009; Kowalski & Rizzo, 1996; Oh et al., 2010; Rizzo & Kirkendall, 1995; Shippen et al., 2005). Despite initial feelings of anxiousness, most pre-service teachers were more confident and prepared after completing the unit and its associated experiences.

Improved self-efficacy

The fifth and final theme identified through the data analysis was improved self-efficacy. Self-efficacy relates to a person's understanding and beliefs about how their capabilities produce effects (Bandura, 2010). Through the series of focus groups, the respondents were able to articulate clearly how they had grown and changed through this experience as indicated by Respondent 1 in Focus Group 3 who stated that changed had occurred when they, 'basically

trust[ed] myself that I could have formed that relationship with them, and get across to them'. One respondent was able to express the change that had occurred as a result of the experiences as commented below:

> Just confidence in myself. The very first session, I was very quiet, very timid …but then by the end of the session, I was like, 'Yeah, I'll do it all. I don't mind.' This is actually really fun. These kids are great. I want to do more. It's being confident and bubbly and exciting, instead of being timid. I can be bubbly, exciting, and it pays off a bit better (Respondent 4, Focus group 3).

This change along with the confidence it brings is a direct result of being in a position to experience working with students with a disability in authentic conditions. This important finding, captured in the students' own words, is supported by many studies in this area where pre-service teachers have completed an inclusive teaching unit and felt more confident and prepared to work with students' with a disability (Hodge & Jansma, 2000; Hodge et al., 2002; Rizzo & Vispoel, 1991, 1992; Tripp et al., 2007).

Summary

In summary, the focus group interviews were invaluable in identifying and highlighting the student voice in the experience of participating in the Inclusion and Diversity in Physical Activity unit. Through the interviews and data analysis it was clear that the experiences in the unit, including the theoretical component, incursions and practical 'hands on' teaching experiences, demonstrated a positive change towards attitudes and confidence when working with students with a disability. This is very important as it further enhances the results found in the *PEATID-11* questionnaire with the same cohort of students that also indicated that positive change had occurred. As a positive approach and understanding will result in a more

favourable attitude towards working with students with a disability, these findings are important and powerful.

Chapter 6 – Phase 3 of the research

Introduction to Phase 3 - Qualitative industry interviews

This chapter outlines the method for Phase 3 of the research, including detail regarding the participants, the individual interview questions and the procedures of the interview analysis, results and discussion of results. Additionally, this chapter will also outline the relationship between the sub-aims and this third phase of the research. Phase 3 involved a series of eight individual interviews with education industry experts. This chapter will provide an analysis and discussion of the results that detail findings relating to the overall research aim and sub-aims.

Relationship between the sub-aims and Phase 3 of the research

Phase 3 of the research is linked specifically to the Sub-aim 4: *To explore the perceptions of teachers, academics and experts in the field of inclusion regarding the incorporation of inclusion and diversity programs within undergraduate teacher education and the training of coaches.* In order to address this sub-aim, eight 'expert' education practitioners were interviewed and their responses were analysed in relation to this sub-aim.

Questions were developed in order to acquire a greater understanding of the past and present experiences of the participants to capture their views on the importance of inclusion and diversity training based on their involvement in inclusive teaching or coaching. This third phase of the research contributes to realising the overarching research aim: *To examine the undergraduate PE student learnings through engaging in the Inclusion and Diversity in Physical Activity unit.* This is achieved through the generation of data that considers the fourth sub-aim: *To explore the perceptions of teachers, academics and experts in the field of inclusion*

regarding the incorporation of inclusion and diversity programs within undergraduate teacher education and the training of coaches.

This data gathered in this final phase of the research will be compared and contrasted with the results of Phase 1 and Phase 2 of the research.

Method

Participants

This phase of the study involved 8 'expert' education industry minimum degree held by all participants was a Bachelor's degree. Four of the participants had bachelor's degrees, one had a master's degree and three participants held PhDs. The participants ranged in age from 30 to 60 years old, and seven of the participants were still working in teaching or coaching. The one participant not currently teaching or coaching has a child with autism and was able to speak about the experiences from a personal perspective. Participants ranged in teaching or coaching experience from 10 to 35 years. In identifying what 'expert' participants would be defined as, it was decided that practitioners with teaching qualifications with five or more years' experience who had worked with people with a disability in an educational or coaching setting would be considered 'expert' for the purpose of this study.

Participation in the study was voluntary and informed consent was obtained from all participants via email. Each of the participants were part of the network of PE teachers, academics and coaches that the researcher had developed professional relationships over the past 30 years.

Procedure

Participants were emailed a request to be a part of the research (see Appendix 4). Of the nine invitations, eight agreed to be part of the research. Once the participant had agreed, a follow-

up Webex invitation email was sent to the participant with the questions included and a consent form attached. Interviews were originally to be held face to face. Due to COVID-19 restrictions, all of the interviews were conducted and recorded through Webex. In addition to this, all of the interviews were recorded on an additional device for later transcription. At the allocated time, participants logged on to the Webex link and the interview was conducted. Eight questions were asked by the facilitator. Each interview conducted was between 20 and 30 minutes in duration. All recordings were then transcribed into Word documents ready for thematic analysis. It is acknowledged that human memory can be considered a limitation, but to this end, as Strong-Wilson (2006) describes the concept of bringing memory forward and using memory as part of a teacher's narrative and forming stories upon which to reflect.

Instrument

Eight questions were developed in consultation within the research team that asked the participants to reflect upon their experiences as an undergraduate and as a teacher/academic/coach. The questions posed queried participants about their opinions regarding the importance of, and need for, inclusion training in undergraduate programs. Each of the interviews used the following questions:

1. What experience, if any, have you had working with people with a disability?
2. Have you had a child/children with a disability in your mainstream classes?
3. Did you feel adequately prepared to deal with this students and provide the best opportunities for that child/children?
4. Do you feel that there is adequate training for teachers working with people with a disability in mainstream settings?
5. Do you feel that it is the responsibility of university to give training to undergraduate teachers before the completion of their degree?

6. What, if any, training is provided to teachers by your organisation once they are employed?
7. What training would you have liked to have received as an undergraduate in the area of working with children with a disability?
8. How important do you feel that training and experience in working with children with a disability is? Why?

Additionally, each participant was asked at the conclusion of the interview, if they wanted to add something to the interview that they felt was important or that they had omitted to say previously.

At the completion of the interviews the recordings were checked and then transcribed. Once the transcripts were completed, the transcripts were emailed back to the participants to ensure they were an accurate representation of the interview. All participants were in agreeance that the transcripts were a true representation of the interview conversation.

Data analysis

A thematic analysis of the interview transcripts was completed using the same structured approach as was detailed in Chapter 5 (Braun & Clarke, 2019; Clarke et al., 2015). Each of the transcripts was scrutinised for similarities and those similarities were used as themes. Also noted were any responses that particularly resonated with a particular theme or emerged as interesting or contrasting. As per Chapter 5, the thematic analysis followed a specific process including a thorough and meticulous interrater reliability process with two other researchers. To generate the data, the interviews were transcribed into Word documents that were then highlighted individually to identify any commonalities and/or contrasting ideas. Once the individual analysis was completed, the transcript data were combined and added to a large

spreadsheet where colour-coded common themes were identified. The identified themes relate to the overall study and targeted sub-aims.

Results

The results of the eight interviews with experienced teachers/academics and coaches were analysed to understand their experiences as an undergraduate and then to reflect upon their experiences as a teacher/academic or coach in relation to working with students with a disability. The participant interview data were categorised into themes based on the responses to the eight questions. Five themes were identified after a thorough thematic analysis of the focus group transcripts. The emergent themes identified were: inadequate training opportunities, mandated and compulsory units and accreditation, training based on classroom experiences or self-managed upskilling, pursuing professional development, and capacity building for a more inclusive society.

A series of five questions were yes/no questions. Questions that were provided to the interviewed participants were analysed to determine the distribution against the anchors; for example, yes/no. Resultant data from the yes/no questions were expressed as percentages to aid in the consideration of the data. The response patterns to these questions are detailed in Table 11.

All respondents indicated that they had taught students with a disability and 75% reported that their training was inadequate for this experience. All respondents believe that disability and inclusion training is the responsibility of universities, and all identified that they would have appreciated additional or enhanced training. Furthermore, 100% of those interviewed believe that training and experience with working with students with a disability is important.

Table 11

Respondents' yes/no responses to questions

Question	Responses
Have you had a child/children with a disability in your mainstream classes?	100% said yes
Did you feel adequately prepared to deal with this students and provide the best opportunities for that child/children?	25% felt they were prepared 75% felt they were not prepared
Do you feel that there is adequate training for teachers working with people with a disability in mainstream settings?	100% agreed that training is not adequate
Do you feel that it is the responsibility of university's to give training to undergraduate teachers before the completion of their degree?	100% agreed that training should be responsibility of universities
What, if any, training is provided to teachers by your organisation once they are employed?	50% had training provided 50% did not have training provided
What training would you have liked to have received as an undergraduate in the area of working with children with a disability?	100% would have liked more training
How important do you feel that training and experience in working with children with a disability is?	100% respondents agreed that training and experience are important

Description of themes

Theme 1 – Inadequate training opportunities

The first theme respondents identified was reported as inadequate training opportunities. The results showed that 75% of participants responded they had not received adequate training and that they felt unprepared going into their first teaching role. Respondent 3 specified that the first time they were faced with a student with a disability: 'There was nothing in my training

that really prepared me for that situation.' Additionally, 75% of respondents also reported that the training they did receive once they were working was inadequate, as Respondent 4 described: 'Sometimes it's only ten minutes in a meeting which isn't sufficient.' Concerns were raised in regards to some of the training provided by schools and organisations, as they were disability-specific (medical model) rather than inclusion-focused using the social model of inclusion. Respondent 5 indicated that some of the training '[had] separate training on dealing with kids with autism or ID or whatever … and it just perpetuates a box mentality rather than know my content and how to modify that content'. These reflections were of their undergraduate studies training and first positions as PE teachers or coaches.

In contrast, 25% percentage of respondents indicated they had some disability and inclusion training as an undergraduate and felt it was of a good standard and very useful to their teaching. Respondent 8 outlined that the special school placement, that was a part of the training in the undergraduate program, and the accompanying classroom and practical activities were an advantage when teaching. Respondent 8 commented:

> I think I was really well-prepared. Compared to most teachers who probably felt as though they got nothing from other places, we … our heads of both the discipline and the program at that time were into Adapted phys ed. So, it was a big focus of our program.

Respondent 8 also stated that: 'In terms of physical modifications and adapting activities for people with a whole range of physical disabilities, I felt quite confident.'

There was some concern about the types of training that was provided in-house at schools and organisations. All of those interviewed were well versed with the social model of inclusion and its application to teaching. Respondent 5 was concerned that 'what I've seen is, it's been a shift back to the medical model, which really does not prepare teachers'. That same respondent

continued to detail in the interview that: 'I think it's definitely moving back towards a medical model in universities and also in terms of teacher training. And it's disastrous. Disastrous.' There was a real concern from this respondent that the training some providers were delivering was not of an appropriate standard, nor was it following the social model of inclusive practice.

Respondents were able to articulate the significance of training in the area of inclusion as important and were able to identify their perceived inadequacies in their undergraduate training. Those who were able to reflect positively on their undergraduate experiences also provided commentary about the lack of training opportunities for university students at the present time. Respondent 8 commented: 'I went through a course where I feel as though I was much better prepared than probably what the students get in this day and age.'

Theme 2 – Mandated compulsory unit/accreditation

Theme 2 was identified as a call for mandated, compulsory units in inclusion and disability for all PE undergraduate teachers and coaches. Respondents were cognisant of the Victorian Institute of Teaching (VIT) and Australian Institute for Teaching and School Leadership (AITSL) requirements for undergraduate teaching courses. Respondents were able to articulate that despite these accreditation requirements that universities should do more to ensure that adequate training is given to prospective teachers and sport coaches. Respondent 8 commented: 'It's an expectation, but I don't think it's enough just to say, "Okay, here's our token course, and tag it – yep, tick that box"'. All respondents believed that inclusive training is paramount to better outcomes for their students.

> I think it's the role of the university to get in there early, a trainee teacher shouldn't come out of university and go into a school and be able to say, 'Well, I don't know anything about kids with a disability,' or, 'I don't know anything about autism. And so, this is all brand-new to me. How do I do this?' (Respondent 1).

All 8 of the respondents indicated that universities should be responsible for adequate training in the areas of disability and inclusion. Respondents agreed that the accreditation standards were very good starting points for most undergraduates, but were also able to indicate that more can be done in this space. Respondent 3 outlined that when preparing undergraduate PE teachers,

> We're preparing them for that really diverse set of experiences that they might have out there, and knowing that each of them is contextual and you can't prepare them for everything. I certainly feel we have a very strong responsibility towards this.

Additionally, while it was acknowledged that there is some training in inclusion and diversity provided in courses, in some cases it is simply through one unit of study in the whole degree, as indicated by Respondent 8:

> We're preparing teachers adequately simply through one course. So that's why our team – we really actually need more capacity right across our school 'cause it seems to be an area of need for staff across all programs.

Note: In this case, course means one unit of study.

Theme 3 – Training was based on classroom experiences or self-managed upskilling

Through the analysis of the interview responses, a third theme was identified. This theme relates to a belief that most training, once in a school or organisation, was based on personal classroom experiences through the presence of a student with a disability in their class – a lived experience. In addition, respondents also indicated that teachers were self-managing any upskilling through private providers and in-house learning provided by the school or organisation. No real planned and sequential delivery of disability and inclusion content or pedagogy was apparent.

Respondent 7 shared an example of a situation of how their personal lived experience has shaped the way they teach now.

> Students with disabilities would appear in your class and you would try and cater for them and their needs as other students in your class as you best could… Now, I'm armed with better strategies to motivate, to encourage, to cajole kids.

Other respondents felt motivated to assist their students any way they could:

> I operated on my instincts about what was going to work for those kids. I think this is the right thing to do, so this is what I'm gonna do to try and have these kids be included (Respondent 1).

Another respondent felt that they had to respond to the need as it arose,

> literally on the fly, and from there, it was about reading and – but it was also about each time someone came into my class with something new that I hadn't come across, how do I then work with that particular special need (Respondent 2).

Some respondents also felt that there was a lack of support in the classroom as indicated by Respondent 5: 'The challenge I had was at the start, I didn't have anyone in the classroom to support me. I was going to be riding this solo.'

Respondents also indicated that they relied on their colleagues for support and assistance when working with students with a disability, 'so even if they weren't phys ed, is if something wasn't working, you just go back and ask another one of your colleagues' (Respondent 5). There was also an acknowledgement that as teachers became more confident they would seek assistance through professional development or through discussions with colleagues, as shown by Respondent 7 who said:

> …and that at a point where I was educated enough to understand what to do and what not to do, and when to ask for help and how to upskill myself, and also professional development and that kind of thing.

Respondent 4 detailed the experience at a private school that put together a training program for teachers:

> They gave so much information and so much support and did a lot of professional development that whilst I wouldn't have initially felt comfortable, I think over the course of the year, you felt like you were really well-informed and given the support to be able to include young people in the class – in mainstream classes in a meaningful way.

This contrasted sharply to Respondent 7 who indicated: 'When I first started out 35 plus years ago, no, very, very little support.'

The majority of respondents described a lack of training that resulted in learning that occurred through a lived classroom experience or school or organisation-based training designed to support a particular need or student need. While this proved to be successful in most cases, this was not the preferred model of the respondents, as they felt under prepared and lacked confidence while working with that student or students.

Theme 4 – Pursuing professional development

All respondents indicated that they believed that inclusive training for teachers or coaches when working with students with a disability in a mainstream setting was inadequate (see Table 11). The fourth theme that was identified through the interviews was that they wanted specific knowledge of inclusion, including teaching experiences, curriculum and lesson planning. Respondent 1 reported: 'I think what we learned as an undergraduate was all very mainstream

and very middle of the road,' and this was echoed in several other responses from other respondents. All respondents indicated strongly that they would have like to receive more training, even those who had acknowledged that they had received some training. Additionally, many of the respondents who are currently teaching in tertiary PE courses indicated that more training for their students would be beneficial:

> Are we preparing them adequately? I guess it depends on if … should they be ready to handle every situation that they come across or should they be ready to learn how to handle every situation that you come across? (Respondent 6).

Furthermore one of the tertiary educators remarked:

> 20% of the primary graduates in my course are probably adequately prepared, and then you've got the rest that have maybe two full units that would have inclusion and disability as a focus (Respondent 6).

Respondents also indicated that they felt that practical experiences would also have been or would be of benefit to PE teachers and coaches. Respondent 6 detailed,

> As an undergrad, I would have liked when we were looking at, for example, developing curriculum and putting together units of work essentially in the practical area.

Respondent 4 had participated in a coaching athletes with a disability course as part of undergraduate studies and remarked:

> I think the coaching athletes with a disability should have been available for all students that were going through a phys ed course, definitely. And that was great because it gave practical examples, like you engaged in the activities and looked at how you could modify and how the game would look and you played the game to make sure.

The premise that inclusion was important and the skills of inclusion were important for PE teachers and coaches to have was compelling in all interviews. This group of 'experts' were committed to inclusion and believed that inclusion education and practical experiences were critical to the confidence and skills of the teacher and coach and the inclusion of the students they would teach or coach. Respondent 7 stated:

> So the same way that you design a class and you think about where you're gonna teach, what equipment you need, the sequencing of your lesson, what you might do as a warmup, what you might do as skills and drills. I think it would have been very useful if I had been encouraged to think about what would I then do in terms of activities for someone who may have a physical disability or an intellectual disability.

The 'experts' felt that there needed to be more of a focus on the skills, but also on the idea of being inclusive. Respondent 8 indicated that, 'I would have liked to have been encouraged to think about how I would have made the class and that activity inclusive'. One respondent felt that without some concerted effort by the school or organisation, some teachers or coaches were left without the skills or motivation to be inclusive. Respondent 8 stated:

> There was no support forced upon us or provided in terms of – you could get away with doing virtually – literally nothing if you chose to.

The analysis of the transcripts also found that teachers valued the 'hands on' practical learning opportunities. Respondent 4 detailed that they believed that,

> …working with the special schools or with students that need modifications and learning from those experiences would've been really beneficial.

And Respondent 3 stated there needed to be '… more opportunities to be out there and amongst children with special needs.' This was a common thread throughout the transcript analysis which lead on to the final theme of capacity building for a more inclusive society.

Theme 5 – Capacity building for a more inclusive society

The fifth and final theme that was revealed through the analysis of the transcripts was that the respondents believed that inclusive training or exposure for teachers would improve capacity building and a therefore a better society. Inclusion and inclusive practices identified were important and valuable, as commented upon by Respondent 6. They stated that:

> As educators, we have that responsibility and so you can do something to address those needs and you need training about it. You need to know how to do it.

Experts described the importance of providing inclusive experiences for students with a disability as important as reported by Respondent 7 who said:

> So if those behaviours and those experiences are much more positive within the classroom setting, when those able bodied or able students are in the community, they have a greater appreciation and understanding and ability to be inclusive in the way they go about things.

Respondents were also able to describe the personal experience they have had when working with students with a disability, as detailed by Respondent 3: '…because just having experiences like that have said to me how meaningful that is.'

The transcripts reflected an understanding of capacity building and a commitment to inclusive practices. One respondent detailed the importance of inclusion through an example of how one student could share their experiences with another.

> When you actually share those experience and just share, you're talking with others, it just broadens that spread in the community and then they share it and it's almost like that ripple effect. I don't know if I can use that term, that ripple effect (Respondent 7).

Further to that, it was proposed that teachers who were implementing inclusive practices could share their skills and knowledge with staff at their schools. Respondent 8 suggested that those teachers were, 'the real champions, I guess, across the different curricular areas to empower the teachers that are embedded in a school'. Additionally Respondent 7 suggested that:

> It's sharing of that knowledge is powerful. So I think you and I have gone from a shift where very early on people thought, well, if I know this and I keep it to myself that then makes me powerful. Well, no, it doesn't. It just means that you've kept that information to yourself.

One respondent indicated that the key to inclusion was to have educators and coaches

> actually understand what inclusion is and … understand what they need to do to give the best outcomes for people with disabilities (Respondent 5).

In summary, the five themes of inadequate training opportunities, mandated and compulsory units and accreditation, training based on classroom experiences or self-managed upskilling, pursuing professional development and capacity building for a more inclusive society were examined to determine the main concepts in each theme. The discussion below will contextualise the key findings of this phase of this research and show how these themes align or contrast to the existing literature.

Discussion

This third phase of the research was designed to collect and examine the responses from expert educators and coaches in the field of inclusion in PE and physical activity. Data collection was achieved by recording, transcribing and thematically analysing a series of eight interviews where the facilitator posed a set of eight questions that addressed the sub-aim: *To explore the perceptions of teachers, academics and experts in the field of inclusion regarding the*

incorporation of inclusion and diversity programs within undergraduate teacher education and the training of coaches.

This discussion section was designed to address the main considerations and findings formulated from the thematic analysis and subsequent development of the following: inadequate training opportunities; mandated and compulsory units and accreditation; training based on classroom experiences or self-managed upskilling; pursuing professional development; and capacity building for a more inclusive society. Findings from the data will also be interpreted, compared and contrasted with current and existing literature using the themes as a guide for discussion.

Inadequate training opportunities

Students with a disability attending mainstream schools are shifting towards a worldwide practice of inclusion in mainstream schools in countries such as Australia, the United Kingdom, the United States and others (Sharma et al., 2008). According to the Australian Bureau of Statistics (ABS, 2018) there were approximately 7.7% of children under 15 with a disability in 2015. This indicates that many of these children with a disability attended both mainstream and specialist schools. When interviewing the education experts, it was found that all indicated that they had a student with a disability in their mainstream classes. The majority of respondents (75%) also reported that they felt they had inadequate training to accommodate the needs of these students. This finding is supported by the outcome of a study conducted in Scotland, where a 96% majority of pre-service teachers reported that they were not equipped to teach inclusively (Wishart & Manning, 1996). Clear evidence indicates that teachers in mainstream schools will, at some stage, have a student with a disability in their class; therefore, inadequate training will impact students with a disability and their educational needs if this is not addressed (Gersten & Woodward, 1990; Gyimah et al., 2009). With this in mind, our respondents reported

it is imperative that quality training is provided both at the undergraduate and at the organisational level, as there is a perception that undergraduate teachers are not equipped and confident to be inclusive given a lack of training (Cambourne, 2002).

To provide a quality experience for the student with a disability the education, experts interviewed for this study reported that they would have liked to have had more training at an undergraduate level and then be provided with additional training once they had commenced their role in a school. There was a perception that teachers would try and accommodate the students' needs and would try to do whatever they could to ensure supportive practices were implemented to cater for the students. This finding is consistent with research that indicates inclusion is often achieved with the goodwill of the teachers involved (Avramidis & Norwich, 2002; Forlin, 2001).

Inclusive education training is important as an influential factor in framing teachers' attitudes to inclusion (Avramidis & Norwich, 2002; Forlin et al., 2007; Hastings & Graham, 1995). As the majority of the expert educators interviewed in this research agreed that training was not adequate in both undergraduate and education institution contexts, this is of concern. If teachers are not given adequate training then the experiences for the students with a disability may be lessened contributing to undesirable educational outcomes for the students. Sharma et al. (2008) argued that for teachers to be truly inclusive and educate others around them, then training is essential.

In most cases, undergraduate students are given one standalone unit (Australia) or course (United States) in inclusive education practices with much of the theory of inclusion embedded in another units across the degree, otherwise known as content infusion (Sharma et al., 2008). Education experts in this study believe inclusive PE training is paramount to improve the confidence and skills of a pre-service PE teacher. This is consistent with other studies that also found the importance of inclusive training to PE teacher confidence and skill development

(Obrusníková et al., 2003; Oh et al., 2010; Tripp et al., 2007). As Evans (2017, p. 322) stated: 'We are duty bound to provide inclusive education.' To do this we need to ensure that our teachers are well trained, confident and skilled, with a motivation to provide the best inclusive opportunities they can for all students. It is clear from the expert educators' responses that inclusive practices should be taught in order to best prepare our future teachers and coaches.

Mandated and compulsory units and accreditation

Respondents in the interviews were very clear about the need for mandated training in the area of inclusion. They also indicated that they believed that universities should be responsible for that training, in particular for those teachers who are PE-trained or sport coaches. All respondents reported that the need for this training is not an 'opt in' or 'tick box' that universities should do, but rather a targeted and quality attempt to enhance the confidence, skills and knowledge of our future PE teachers and coaches when including all students in their programs.

International and Australian studies have shown that the inclusion of training and the adoption of a 'hands on' approach to working with students with a disability will provide opportunities for teachers to generate more favourable attitudes and opinions regarding working with people with a disability (Block & Rizzo, 1995; Martin, 2011; Obrusnikova, 2008; Oh et al., 2010; Pedersen et al., 2014; Rizzo, 1984; Rizzo & Kirkendall, 1995; So et al., 2008). Contrary to this, respondents in this research found that the training was not targeted and specific, and in some cases, of poor quality or not offered at all. All respondents strongly indicated that inclusive training for PE undergraduates was important for our future teachers to provide quality, inclusive experiences for all students in their PE classes. This perspective is consistent with findings in other research in this area specifically the work of Majoko (2019) and Tripp et al. (2007).

The most effective approach to inclusive PE training has been widely debated. Two approaches most commonly found in universities are standalone units and the content infused approach (this is sometimes called embedded across the course approach). What we do know, and what was clear in this research, is that whatever type of approach is used by universities, there is a need for a full commitment to inclusive practices by teachers and universities in order to prepare future teachers. A structured approach to the implementation of systematic inclusive education and training will result in fostering positive attitudes within the undergraduate PE students. The research data were able to report that inclusive training will result in positive attitudes and intentions in undergraduate PE students which is also supported by other researchers in this field (Brownlee & Carrington, 2000; Hastings, 1996). There is consistency within the research literature that a 'hands on' approach is viewed as more advantageous than the adoption of a theory-driven education framework for the undergraduate (Morley et al., 2005; Vickerman & Coates, 2009).

Skills, knowledge and capacity gained throughout their teaching was based on classroom experiences or self-managed upskilling

It was evident from the interviews in this research the expert educators believed that improved capacity occurred through the 'lived experiences' they had as educators teaching students with disabilities. Interviewees reported that while their capacities grew according to their experiences in the disability field, they also acknowledged the value of opportunities for increased experience. This research demonstrates that inclusive training would benefit new teachers and undergraduate PE students. The question that would need to be asked is: Why wait until that happens in your class? This research showed that there was value in having that capacity to work as a confident inclusive educator when beginning a career in teaching. The expert educators also agreed that inclusive training should be more of a focus in tertiary settings. This is supported by other research that details the importance of inclusive training

and close contact with people with a disability as being essential to better outcomes for teachers (Forlin et al., 2009).

Additionally, the interview data from this research revealed that the expert educators were seeking professional development to supplement their skills, confidence and knowledge of inclusive practices. According to the interviewees, appropriate professional development was not always provided by the school or organisation they were working in, and often the educators found themselves seeking out their own appropriate professional development. This is consistent with research literature that detailed that many teachers have indicated the desire to engage with professional development opportunities to upskill themselves and feel more capable of providing inclusive education for all students (Engelbrecht et al., 2003; Sermier Dessemontet et al., 2014).

Pursuing professional development

Several studies have found that participants who have engaged with one or more inclusive education training opportunities in PE have a more positive and structured approach to inclusive practices (Block & Rizzo, 1995; Folsom-Meek & Rizzo, 2002; Kowalski & Rizzo, 1996; Özer et al., 2013). The respondents in this study reported a desire for additional training, and quality training, to upskill themselves in inclusive practices in physical activity. This supports research that has found that both pre-service and practising teachers desire additional training (Shade & Stewart, 2001). Respondents were steadfast in their views that the inclusive training should have a practical component. This contention is supported by other research studies that have shown that a practical component is highly valued by most pre-service and practising teachers (Hodge et al., 2002; Perlman & Piletic, 2012).

Respondents further contended that training in inclusive practices should also contain elements such as lesson planning, reflection and inclusive pedagogies. These findings are supported by

previous studies that reported that participants valued these additions (Sermier Dessemontet et al., 2014). Allday et al. (2012) found that teacher competencies are founded in pre-service education and, as such, it is imperative that universities are able to embed inclusive pedagogies, skills and knowledge at the undergraduate level. Kisabeth and Richardson (1985) proposed that being able to prepare a lesson plan for a student with a disability to be particularly helpful for teachers to function more effectively in the area of inclusion. If undergraduate and graduate teachers are effectively skilled through quality inclusive training, then this will influence their confidence, attitudes and capacity to be inclusive of all students (Avramidis & Norwich, 2002; Loreman et al., 2014).

The quality of training provided to respondents in this research was also highlighted in the interview data. Respondents in this study questioned some of the types/approaches and content of training that was on offer through external bodies to the schools or organisation. The respondents voiced some concern that the professional development was targeting disability-specific objectives and not focused on inclusion for all or the social model of inclusion. Respondents reported that some professional development for specific disabilities was not seen as appropriate as it became about the disability and 'fixing' the disability rather than making changes to include the individual. The issue with this is that the way professional development is presented will influence the way teachers respond to a student with a disability and this can affect pedagogies and instructional approaches to inclusion (Haegele & Hodge, 2016). Respondents of this study believe that an inclusive approach (or social inclusion model) should be the preferred model (versus the medical model) for professional development for teachers. While the medical model approach to disability is about 'fixing the individual', the social inclusion model is about changing the society or environment the student with a disability is in, and doing away with categorising or labelling the students (Haegele & Hodge, 2016).

In a review of teacher training for inclusive education, Tristani et al. (2019) found that all types of strategies and approaches to inclusive practices can lead to more positive teacher attitudes, but a workshop approach was often found to be more conducive to change in skills and inclusive practices. What was important to the respondents in this study is that they wanted practical activities and 'hands on' training. Coates (2012) found that 60% of students participating in inclusive education training found it ineffective as they believed they needed a more practical 'hands on' approach. The findings of this research further support this belief.

Capacity building for a more inclusive society

At the very core of the interview data in this phase of the study, was the finding that effective inclusive training and better-equipped teachers would provide a better, more inclusive society. The respondents understood that training and experience are required to build capacity and social capital within schools and within society. Building teacher and school capacity can only occur with a full commitment to inclusion and inclusive practices. Lawson (2006) posed that, according to the United Nations Convention on the Rights of Persons with a Disability (UNCRPD), for inclusive practices in schools to occur, teachers should be educated through an understanding of disability and effective pedagogies and techniques. The UNCRPD (United Nations, 2006) report findings are an important step to ensuring that students with a disability are included as a matter of right.

The respondents in this research were also aware of the community needs of schools and the role schools can serve in providing inclusive experiences for all students. There was an understanding that, in order for schools to be truly inclusive, teachers need to be aware of the impact and stress of having a child with a disability brings. In an Australian study by Carroll et al. (2003), it was recognised that teachers play a major part in shaping the attitudes of students in their classrooms have towards students with a disability. Despite this, and with

research that clearly indicates the need for better teacher training in the area of disability and inclusion, teachers are still indicating that they feel underprepared (Anglim et al., 2018; Avramidis & Kalyva, 2007).

This research suggests that expert educators consider the 'hands on' educational approach to be adopted where possible, when preparing undergraduate and future teachers to be more inclusive. The expert educators indicated that 'skills rehearsal' and confidence building were important in the learning and that it is important to give undergraduates the skills before they leave university. This 'hands on' approach is consistent with previous research that has examined types of inclusive training delivery in tertiary settings (Kowalski & Rizzo, 1996; Pedersen et al., 2014; Rizzo & Vispoel, 1991, 1992).

Respondents in this phase of the study also contended that inclusion should be a whole-school approach in order for change to affect society. It was also contended that inclusion in schools has placed considerable pressure on teachers to meet the needs of all students and this is supported by research by Avramidis and Kalyva (2007). Acknowledgment of the stresses that having a child with a disability brings upon a family, and the importance of schools and teachers in providing a safe inclusive environment for that child, has been found in previous literature in this area (Chambers & Forlin, 2010).

Summary

In summary, this phase of the research has demonstrated that expert educators believe that, while there are some universities preparing their students for inclusive practices, in the main there is not enough training available. In some cases, the training has not been of a high standard, nor does it address inclusion from the social inclusion model but rather an outdated medical model approach. All experts interviewed wanted better training, to feel more prepared and be more confident working with students with a disability in the PE setting. The responses

they provided were student-focused and there was a real desire to ensure that students with a disability were included and challenged. Respondents expressed their hope that all PE teachers had the confidence, skills and positive attitude to be inclusive of all students.

Chapter 7 – Discussion, implications and conclusions

Discussion

This chapter will detail the compilation of the key findings of the research and link these to the overall research aim and sub-aims of the study. The findings of the three phases of this research study supported the attainment of the overall research aim of this study which was: 'To examine the undergraduate Physical Education student learnings through engaging in the Inclusion and Diversity in Physical Activity unit.' This was achieved by developing three distinct phases of the study to address sub-aims and to link the phases in a triangulation approach to ensure that depth was added to the data through a mixed method design (Fusch et al., 2018). The triangulation approach gathered the data in various ways and was used in a range of data sources that provided reliability of results (Fusch et al., 2018; Lindgreen et al., 2009). In this research, both qualitative and quantitative methods were used to collect data allowing for greater considerable confidence in the findings and a robust overall study (Stavros & Westberg, 2009).

Each of the phases of the research was able to collect, analyse, and then interpret data which strongly support the need for an inclusion and diversity unit of study that included 'hands on' authentic experiences for PE undergraduate. The findings and implications will be detailed below addressing the sub aims and overall aim of the research.

Sub-aim 1

To investigate the students' experiences while engaging in the Inclusion and Diversity in Physical Activity unit and if they changed their perceptions of people with disabilities or working with people with a disability.

This sub-aim was addressed by Phases 1 and 2 of the research design. The *PEATID-11* questionnaire was used to compare pre and post-attitudes towards students with a disability in PE classes. The set of significant results of this phase of the study, using the questionnaire data, demonstrated that participating in the Inclusion and Diversity in Physical Activity unit resulted in more favourable positive attitudes towards working with people with a disability in physical activity settings. This is an important finding as this aligns with the outcomes of previous national and international studies that used the same questionnaire to report on research to compare pre and post-attitudes, and post-unit comparisons towards students with a disability in PE classes (Block & Rizzo, 1995; Ellis et al., 2012; Kowalski & Rizzo, 1996; Oh et al., 2010; Pedersen et al., 2014; Rizzo & Kirkendall, 1995; Schoffstall & Ackerman, 2007). This finding also provides a rationale for universities to include this type of training in the curriculum for pre-service PE teachers.

As discussed previously, positive attitudes towards working with students with a disability are essential for providing opportunities for students with a disability to be included in physical activities (Folsom-Meek & Rizzo, 2002). The findings of this phase of the research of a positive change in attitude after completing the Inclusion and Diversity in Physical Activity unit demonstrate that the undergraduate PE students will be more prepared to be inclusive when working with students with a disability, creating better opportunities for both the teacher and students with this training and experience. A positive change in attitude towards working with students with a disability is important as PE teacher beliefs and attitudes influence their inclusive practices (Hodge et al., 2004). If a goal is to have more students with a disability included in PE classes, physical activity sessions, and sport programs, our PE teachers and coaches need training to ensure that this can occur, as PE teachers who have more favourable positive attitudes towards students with a disabilities are more inclusive in their classes (Avramidis et al., 2000; DePauw & Doll-Tepper, 2000).

The Inclusion and Diversity in Physical Activity unit that was at the core of this research, includes practical 'hands on' components of visits to special schools, involvement in special schools sports days and delivery of practical sessions with special schools students, alongside the inclusive unit's workshop content and activities. This combination of theory and practical opportunities has been found to be very effective and is something that the students reported was very important for their confidence and skills development. Several research studies that examined the importance of inclusion and disability training for undergraduate teachers, have reported that a combination of both theory and practical experiences was the preferred model to encourage inclusive practice (Apache & Rizzo, 2005; Coates, 2012; Di Nardo et al., 2014; Martin & Kudláček, 2010; Pedersen et al., 2014; Perlman & Piletic, 2012; Schoffstall & Ackerman, 2007; Tindall et al., 2015).

The assessments for the Inclusion and Diversity in Physical Activity unit includes preparing session plans with inclusive practices and modifications to ensure that all students with a disability are able to participate. An important part of this unit is the presentation assessment at the conclusion of the unit when students are asked to reflect on their experiences and detail what they have learned about themselves through participation in the unit. Case et al. (2020) indicated that one of the recommendations they have, after completing a meta-analysis of Adapted PE programs in tertiary education for PE undergraduates, is to include reflective practices and 'service-learning' or 'hands on' opportunities for programs to be more successful. The undergraduate PE students indicated that the combination of theory and practice gave them a greater understanding about inclusion which is supported by other studies in this area (Kowalski & Rizzo, 1996; Rizzo & Vispoel, 1991; Rizzo & Kirkendall, 1995; Tripp & Rizzo, 2006).

In addition, this research found that PE students felt better equipped with the skills, knowledge and confidence to engage in teaching students with a disability, post-completion of the unit,

which is supported by previous studies using the PEATID questionnaire (Block & Rizzo, 1995; Ellis et al., 2012; Kowalski & Rizzo, 1996; Oh et al., 2010; Pedersen et al., 2014; Rizzo & Kirkendall, 1995; Schoffstall & Ackerman, 2007). To further explore this finding, the second phase of the research examined the participating students' 'lived experience' through a series of focus group interviews.

Phase 2 of the research had five main themes comprising: improved knowledge of inclusion and diversity; personal growth as a facilitator or professional; perceived teaching competence; anxiety; and self-efficacy. What was clear in the focus group data is that the interviewed students felt more confident, competent and prepared to work with students with a disability in a physical activity setting after completing the Inclusion and Diversity in physical Activity unit. The interviewed students also felt that the unit, particularly the practical component of the unit, was important to their learning. Respondent 1 of Focus Group 3 indicated:

> … we've already had that prior experience now when we are in the field and we are teaching, there are students in our class that do have some disabilities that we are able to draw on these experiences, and what's worked well, and what hasn't worked well.

The students felt that the unit activities and experiences were valuable and important. To support this, in Phase 3 of the research, the interviewed experts also indicated the value of such a unit by expressing:

> …a trainee teacher shouldn't come out of university and go into a school and be able to say, 'Well, I don't know anything about kids with a disability, or, I don't know anything about autism. And so, this is all brand-new to me. How do I do this?' (Respondent 1).

The three phases of the study have found that students in the study who completed the unit and participated the in the Inclusion and Diversity in Physical Activity unit developed a more

favourable attitude towards working with students with a disability. This change occurred as a result of personal growth as a facilitator or professional; improvement in perceived teaching competence; a decrease in anxiety; and improved self-efficacy.

Sub-aim 2

To evaluate how students have grown and changed as a result of participating in the Inclusion and Diversity in Physical Activity unit.

Sub-aim 2 was addressed in Phases 1 and 2 of the study. The data collected through the *PEATID-11* questionnaire showed that, while undergraduate PE students were generally positive about working with students with a disability to begin with, there was a significant change in attitude and intention at the completion of the unit. It was also found that when the data were analysed by gender, the males showed a more significant change in attitude and intention compared with the females. This suggests that this unit is important for males to undertake in order to create a more fully inclusive PE classroom for our students with a disability. This study's finding of males being less positive about working with students with a disability was also found in several other studies (Aloia et al., 1980; Avramidis et al., 2000; Block & Obrusnikova, 2007; Boyle et al., 2013; Downs & Williams, 1994; Hutzler, 2003; Kalyvas et al., 2011). While both genders reported more favourable attitudes towards working with students with a disability after completing the unit, this study determined that males had a greater positive change. Males showed lower scores in the pre-unit questionnaire in the categories of attitudes, intention and subjective norms. No discernible differences were found between males and females' post-completion of the unit, indicating that positive change had occurred and the importance of inclusive training for both males and females, but especially males, to ensure the best opportunities for students to be included in PE classes.

A positive change in attitude was also reflected in the lived experience of the interviewed students in Phase 2 of the research. One respondent indicated, 'disability is a not a limitation but just a barrier to work around… see the person not the disability' (Respondent 1, Focus Group 2). This demonstrates that the undergraduate PE student was able to understand that disability was not a limiting factor for participation in PE classes, and was able to create inclusive opportunities and experiences for the students with a disability with whom they were working. All of the five themes that were identified in Phase 2 interview data indicated some growth and positive change in the participants. The themes of: improved knowledge of inclusion and diversity; personal growth as a facilitator or professional; perceived teaching competence; anxiety; and self-efficacy, all revealed how the students had grown and changed in a positive manner towards working with students with a disability in physical activity settings.

Participants in student focus groups outlined how they had grown as a facilitator and as an educator. Participants were able to clearly identify areas in which they had grown and changed. Patience and understanding were mentioned by 80% of the respondents as attributes they had acquired, or had improved upon, during the experience of working with students with a disability. Working with students with a disability in a PE setting was identified as needing extra patience and understanding by participants in this study and this has been reported by other studies such as that by Hodge et al. (2009). Participants in this study were able to see the positive effect on the inclusive experiences on themselves as a professional educator and as a facilitator as they became more confident and improved their self-efficacy. As Ajzen (1991) proposed, teachers' self-efficacy beliefs can influence aspects of their teaching and how they feel about their teaching of students with a disability.

Perceived improved teaching competence after completing the Inclusion and Diversity in Physical Activity unit was also evident from the data in this research. The majority (90%) of

participants indicated that their involvement in the unit was positive and participating in the unit gave them confidence in regards to teaching students with a disability. Furthermore, 70% of participants indicated that this experience would be beneficial to them when teaching in the future. Participants were able to clearly identify positive change in their levels of competence and confidence through the focus groups interviews. Embracing the philosophy of inclusion, understanding the need to modify and adapt activities, and being comfortable with students with a disability can be achieved by engaging in an inclusive education unit, as this research has shown, and similar research around inclusion has demonstrated (Sharma et al., 2008). This research has clearly demonstrated that participation in an inclusion and diversity unit creates a positive effect for these participants.

Sub-aim 3

To examine the 'lived experience' of students' engagement with the Inclusion and Diversity in Physical Activity unit.

Phase 2 of the research was designed to examine the 'lived experience' of participants in the Inclusion and Diversity in Physical Activity unit. This part of the research was important as it examined what students felt and experienced based on their own descriptions. Conducting the student focus groups allowed for data that complemented the quantitative data and gave a personal perspective of the teaching and learning experience of the participants. It was clearly demonstrated in the first phase of this research using the *PEATID-11* questionnaire that participants had more favourable intentions and attitudes towards working with students with a disability in a physical activity setting post-completion of the inclusion unit. This finding is consistent with previous research conducted using the same questionnaire (Apache & Rizzo, 2005; Coates, 2012; Di Nardo et al., 2014; Martin & Kudláček, 2010; Pedersen et al., 2014; Perlman & Piletic, 2012; Schoffstall & Ackerman, 2007; Tindall et al., 2015). Phase 2 was able

to examine the participants' experience using their own voices and provided opportunity for the participants to detail their understandings.

As detailed in Chapter 5, through the analysis of the student focus group transcript data, the research identified the themes of: improved knowledge of inclusion and diversity; personal growth as a facilitator or professional; perceived teaching competence; anxiety; and self-efficacy. The participants articulated their concerns and successes in their own words. Participants were able to specify what they had learned; for example: '… the unit also taught us how to focus on the ability rather than the disability and we are able to see them as individuals' (Respondent 3, Focus Group 2). The themes are consistent with research that has reported on the experiences of undergraduate PE students, but this research was able to, through the participants' own words, make evident the deep impact that this inclusion unit had on the participants. Dewey (1934) proposed the notion that experience and learning will impact the participant as they move forward in their learning. This research has found that participants agreed with this notion by stating,

> … we've already had that prior experience now when we are in the field and we are teaching, there are students in our class that do have some disabilities that we are able to draw on these experiences, and what's worked well, and what hasn't worked well (Respondent 1, Focus Group 3).

By capturing in their own words the experiences that the participants encountered when working with students with a disability in different contexts – sports days, planned physical activity sessions and school visits – this phase of the research has been able to ascertain what was important or challenging to the participants and not just what was intended by the unit designers. By using the 'lived experience' data, this research has been able to examine these experiences in a deeper and richer way (Finlay, 2009). Using phenomenological research to support the findings of quantitative research gives a rounded first-person account of the way a

participant reacted to the situation. It gives us, as researchers, a real view to the experience of the participants and allows us to understand the challenges and successes of a program such as the inclusion unit from a student perspective.

This research was able to, through a three-phase triangulated research design, identify the benefits of undergraduate students working with students with a disability in a physical activity setting. The data clearly showed that positive changes occurred during the experiences in working with students with a disability and that undergraduate students became more confident, had better attitudes, were more prepared to work with students with a disability and, in their own words, were less anxious about working with students with a disability. This is important as research conducted worldwide supports that students who are better prepared and have better attitudes towards working with students with a disability, are prepared to embed inclusive practices in their teaching (Avramidis et al., 2000; DePauw & Doll-Tepper, 2000).

Additionally, the data from the third phase of the research, that involved the interviews with expert teachers and practitioners, also revealed the need for an inclusion unit to be part of undergraduate studies. They were able to reflect upon their own undergraduate experiences and the need for greater confidence, skills and knowledge as graduate teachers. In fact, the experts who were interviewed were quite strong in their opinions regarding the need for improved training to ensure that students with a disability were adequately catered for in schools and for teacher confidence and skills in working with students with a disability. This is supported by Sharma et al. (2008), who argued that training is essential for teachers to be truly inclusive and competently educate those around them.

Participants in this unit found the hands-on authentic teaching experience useful and reported improved self-efficacy. They indicated that the combination of knowledge through workshops, assessments and the practical ‘hands on’ experiences were a good combination for them to understand how to be confident in their own abilities. Koh (2018) found that undergraduate

courses that included inclusive education resulted in graduates who had greater self-efficacy towards working with students with a disability. This in turn had those teachers with greater self-efficacy being able to provide students with a disability with more positive and engaging experiences in a physical activity setting. Ultimately the goal of the Inclusion and Diversity in Physical Activity unit was to provide students with the skills, knowledge, confidence and experience to generate positive outcomes for students with a disability through modifications of activities and to formulate positive attitudes towards the provision of engaging experiences for those students.

Sub-aim 4

To explore the perceptions of teachers, academics and experts in the field of inclusion regarding the incorporation of inclusion and diversity programs within undergraduate teacher education and the training of coaches.

The fourth and final sub-aim, designed to address the overall research question, was 'to explore the perceptions of teachers, academics and experts in the field of inclusion regarding the incorporation of inclusion and diversity programs within undergraduate physical education and the training of coaches'. This was to be primarily considered within the third phase of the research that involved interviewing experts in the physical activity and teaching field. Eight individual interviews were conducted via Webex and the transcript data were analysed through a thematic analysis. The themes identified through the analysis were: inadequate training opportunities, mandated and compulsory units and accreditation, training based on classroom experiences or self-managed upskilling, pursuing professional development, and capacity building for a more inclusive society.

The additional perspectives of the industry experts support the findings in both Phase 1 and 2 of this research. The industry experts agreed that inclusive education training is very important

and will improve confidence, skills and attitudes of undergraduate PE students towards students with a disability in a physical activity setting. All of the interviewed experts had taught students with a disability in a mainstream setting and 75% of them felt they were not prepared to do so and were been keen to have training to increase their knowledge and skills in working with students with a disability in a physical activity setting. During the interviews, the experts articulated the need for good-quality training at both the undergraduate level and then again once they began teaching to further reinforce supportive practices for students with a disability. The experts were adamant that inclusive PE training is imperative to the confidence and skills of PE teachers when working with students with a disability, which is supported by previous research (Obrusníková et al., 2003; Oh et al., 2010; Tripp et al., 2007).

The experts not only believed that training was important and necessary, but they also deemed that inclusive PE training should be mandated for all undergraduate PE students and sport coaches to ensure all students with a disability could participate in inclusive physical activity sessions. Access to teachers and coaches who are more willing to include students with a disability, who have the skills set, confidence and knowledge, supports the provision of physical activities for students with a disability to experience an inclusive physical activity setting as their teachers and coaches are more confident, skilled and prepared to provide such opportunities. The experts also reported that an inclusive PE unit should have knowledge of disability and methods of engaging and modifying the activities provided, and also that an element of 'hands on' practice should be included in order to facilitate more favourable positive opinions and confidence in working with students with a disability. These contentions are supported by both international and national research which has indicated that a 'hands on' approach will generate more favourable attitudes and opinions about working with students in an inclusive manner (Block & Rizzo, 1995; Martin, 2011; Obrusnikova, 2008; Oh et al., 2010; Pedersen et al., 2014; Rizzo, 1984; Rizzo & Kirkendall, 1995; So et al., 2008).

The expert educators also indicated that inclusive PE training must be of a good standard of quality. They wanted training that was up to date with appropriate language and pedagogies relating to the social inclusion theories of inclusion so that meaningful and inclusive measures are provided in the physical activity sessions. Majoko (2019) and Tripp et al. (2007) also found that for PE teachers to provide quality inclusive experiences they must have had quality inclusive training themselves. While many of the expert educators found that they had improved their knowledge, skills and confidence to work with students with a disability through years of teaching experience, they were adamant that there was real value in teachers having a greater access to extending theoretical knowledge and applied skills at the beginning of their careers. This was also found in research by Vickerman and Coates (2009), who reported the majority of PE teachers in their graduate year were underprepared to teach students with a disability. The concern the experts expressed regarding the lack of good professional development was also echoed in a study by Hodge and Akuffo (2007), who found that teachers were concerned about the quality of the training they received. Targeted, inclusive training for PE teachers at an undergraduate level, through practical sessions with students with a disability, will result in better outcomes for both the teacher and the students with a disability in that inclusive class (Forlin et al., 2009).

There is a firm belief that quality 'hands on' inclusive PE training is important for both teachers and the students they teach (Goodwin & Watkinson, 2000; Özer et al., 2013). The more opportunities undergraduate PE teachers and coaches have to engage with quality inclusive training, the greater the likelihood that they will implement positive structured approaches to inclusion in their classes (Block & Rizzo, 1995; Folsom-Meek & Rizzo, 2002; Kowalski & Rizzo, 1996; Özer et al., 2013). Insufficient opportunities to engage in inclusive education training in physical activity can contribute to feelings of anxiety and a decreased self-efficacy, as was indicated by the education experts in this research and supported by findings by Hodge

et al. (2004). The current study found that the education experts valued the 'hands on' opportunity to work with students with a disability as an opportunity to improving their attitude, confidence and skills set. They believed that improving confidence would lead to better student outcomes. Overwhelmingly, the findings of research aligned with the perspectives of Tant and Watelain (2016), who found that the education experts had genuine concern about providing an inclusive experience for students that they were teaching. This was reinforced by the expert educators, as revealed in the following quote:

> You want to do as many things as you can to be able to best address the fact that you've got 15 different particular needs in a class, and so all of the little strategies that we can do that can address everybody and make learning more accessible (Respondent 6).

As Tant and Watelain (2016) found in their recent study, all-encompassing PE is founded by an inclusive curriculum, teacher collaboration and professional training. This research found that both undergraduate and expert educators agree that inclusive training is critically important. Additionally, the expert educators felt that the inclusive training would lead to capacity building. While this research has not looked at the curriculum delivered in schools but only in one tertiary undergraduate PE unit, this could be a direction for future research, not only for PE teachers but also for schools and the greater community.

Implications

Implications for practice

This research study has highlighted the need for an inclusive PE unit to be included in undergraduate PE teacher training as it highlights that inclusive PE training can provide for greater capacity building in the ability to be an inclusive practitioner. Undergraduate students in this study displayed more favourable attitudes and intentions towards working with students with a disability post-completion of the unit, and equally important, were able to articulate 'in

their own words' the importance of such training for their self-efficacy, skills and confidence. Additionally, this research, through the data collected with expert educators, has shown that PE teachers seek quality inclusive training to support their development, skills and confidence when working with students with a disability in a physical activity setting on an ongoing basis.

With an understanding that an inclusive PE training program, involving 'hands on' experiences, creates students and teachers who are more inclusive and confident in their practice, PE teacher training institutions and sport industries could look to a national or state-based approach towards training PE teachers and sport coaches to be more inclusive. Universities may strive to create units that support future PE teachers and lead the way in developing training packages for schools and industries to access. Ideally, with a state-based or national model, essential messages and best practice would be highlighted in all training. The training that is developed would meet a set of standards. To create a set of standards, a panel of educator experts working alongside students with a disability could provide invaluable input to a model that could inform future training.

University inclusive PE units should detail the most current practices and pedagogies around inclusion and disability and be designed to have content delivered in workshop and practical modes. Learning outcomes and activities that are developed to improve participants' attitudes towards working with students with a disability in physical activity settings should be explicit in nature and undergraduate students should be made aware of this intention. Tertiary educators who are working in the inclusion and diversity space should have an opportunity to connect with other tertiary educators to share ideas, including assessment designs, and experiences through an online forum. This forum should be a safe place where educators form a community of practice and can post comments, questions and ideas without fear of reprisal. This could be hosted online and with invitations to each university and sporting group that demonstrates and reports their interest in inclusive practices. Best practice examples and case studies could be

highlighted and discussed. The unit in question could also have some further considerations including increasing the number of contact hours that undergraduate PE students have with students wish a disability, and providing an opportunity to mix mainstream and special schools for a more inclusive experience.

Where possible, universities should partner with local schools and special schools to create a community of practice that supports both the undergraduate PE teachers, the students at the schools and also the tertiary and school teachers. Working with the local school communities to provide undergraduate teachers and sport coaches with the opportunity to work with diverse student populations would be most beneficial. Having undergraduate students working in a school PE or sport program would also allow for a higher teacher-to-student ratio and provide better learning opportunities for those students. This becomes a mutually beneficial situation for both the school and the university, as both parties gain valuable experiences from such a partnership.

Additionally, the units provided by universities should, wherever possible, include a practical 'hands on' component embedded in both the unit content and relevant assessments that directly relate to that experience. Ultimately, the unit should aim to provide students with a better understanding of inclusion and diversity, and give them an opportunity to use this knowledge to work with students with a disability in a supported environment. Assessments that include reflection of practice and understanding of the principles of modifying activities to be more inclusive should be included.

The findings of this research will be made available to the greater community, schools and universities through a series of publications and conference presentations. The publications and presentations will inform industry about the importance of inclusive training. Consistent with the findings of this research, challenging some of the prevailing ideas around inclusion and diversity training and models of best practice in schools and sporting codes will be addressed.

Schools should also look to support their teachers through in-school training or connecting teachers with access to external professional development to facilitate opportunities for relevant training. Schools should also be aware that teachers, new and experienced, require ongoing opportunities to learn, practise and challenge long-held beliefs. Training could include the introduction or reinforcement of modification strategies such as TREE and CHANGE IT to further support the teachers with being more inclusive in their practices. A primary objective of training is to increase understanding, motivation, and confidence in working with students with a disability. Additionally and ultimately, it is to ensure that students with a disability have access to a fun, inclusive physical activity program, with teachers who are confident and well prepared. Choosing the right type of training for the PE teachers should be done in consultation with the teachers and based on discussions around their needs. Schools should also provide an opportunity for teachers to share experiences, gain an understanding of each other and create a supportive and invested school community.

There is an opportunity for the Australian tertiary PE sector to engage with organisations such as the Australian Council for Health, Physical Education and Recreation (ACHPER), an organisation that supports the professional development needs of PE and health teachers. ACHPER is a national organisation, with state branches, with a purpose to use education and professional practice opportunities to promote healthy lifestyles and living. ACHPER works with teachers of health, PE and outdoor education to ensure the development of skills and knowledge for PE, health and recreation are current and relevant. This is the perfect vehicle to disseminate information and use the extensive PE professional development and conferences held by ACHPER each year to provide training in the inclusive PE area, and to help to empower teachers to feel more confident when working with students with a disability. Interestingly, Australia does not have a professional body that is solely dedicated to inclusive PE and sport,

but rather this is relied upon by ACHPER as the peak body to include in their professional development.

In addition to ACHPER in Australia, there is also the Peak Phys Ed professional body. Their mission is to promote innovation and excellence within PE communities through the provision of exemplary teaching and learning opportunities and resources (Peak Phys Ed, 2021). Peak Phys Ed also include inclusive practices in their conferences and professional development opportunities for teachers.

Internationally, there are many professional bodies that support teachers and educators in relation to inclusion in PE across the world. The International Federation of Physical Activity (IFAPA) is one such organisation. This organisation has members that are tertiary educators, students and practitioners. It has three main purposes:

- to encourage international cooperation in the field of physical activity to the benefit of individuals of all abilities
- to promote, stimulate and support research in the field of adapted physical activity throughout the world
- and to make scientific knowledge of and practical experiences in adapted physical activity available to all interested persons, organizations and institutions (IFAPA, 2021).

The IFAPA is solely dedicated to the promotion of inclusive practices in physical activity, PE and sport across the world, and is an excellent place to start when sourcing international research and resources.

Additionally, there are many other international professional bodies that also support higher education educators, teachers and coaches to be more inclusive. Other organisations include, but are not limited to: the European Federation of Adapted Physical Activity (EUFAPA), the

Asian Society for Adapted Physical Education and Exercise (ASAPE), and the North American Federation of Adapted Physical Activity (NAFAPA). Using these professional bodies as a guide to inform best practice and mapping of ideas, pedagogies and curriculum would be beneficial to inform current practices. Providing these organisations with access to the findings of this research via publications and conference presentations will help to inform this community of practitioners who are committed to inclusion in physical activity.

Other Australian-based organisations such as the Sport Australia and VicHealth, are also places where teachers can find information about inclusive practices. These organisations are keen to work with groups in order to provide inclusive practices around physical activity. Providing these organisations with the findings of this research, will provide them with evidence to discuss and explore future possibilities for supporting and guiding their approach to inclusive practices in physical activity.

Implications for future research

Recommendations for future research directions in the area of inclusion and diversity training for undergraduate teachers and sporting coaches include:

a. Replicate this study with speech pathology students (for whom this is a core unit) to ascertain if the same outcomes are found for contrast and comparison.

This proposed study would be relatively easy to conduct and would add to the body of knowledge for speech pathology courses in the future. The proposed study could follow the same method as this study and there would be ability to compare and contrast the results to ascertain if the unit has the same impact on a different cohort of undergraduate students. Undergraduate students' and expert speech pathologists' 'lived experience' data could be analysed to enhance the unit delivery and ensure that programs are catering for the needs of all students. As speech pathology students would understand the need to work with students with

a disability, the pre-unit *PEATID-11* test would be interesting to compare with the undergraduate PE students.

b. An Australian-wide mapping exercise to see if inclusion and diversity are being taught in each undergraduate PE course and selected sporting organisations and identify some 'best practice' examples and models.

This would be a valuable research project as it would identify how and what is being taught in courses and in units. It would give us an opportunity to compare and contrast what is being delivered in various institutions and sporting contexts and would identify best practice. This information could be shared via a website available for all schools, universities and sporting groups to access.

c. An exploration of selected international comparisons of courses and training for PE students and their impact for these students

This exploration could build on this Australian study and form the basis to compare and contrast 'best practice' models and case studies from all over the world. This would identify gaps and successes that each country has achieved in the way they deliver inclusion and diversity units in PE courses. The research could start as an online mapping exercise and then progress to collection of qualitative responses from staff and students in these institutions including their perceptions of the quality and usefulness of the units. How units of study are delivered, the content of theory delivered and pedagogies used should also form part of this mapping exercise. Further, the recommendation would be to identify 'best practice' models and share these with the greater community.

d. A questionnaire of graduate PE teachers in their first roles in a school.

A questionnaire that surveys graduate teachers about their experiences working with students with a disability in PE classes to determine the level of support they receive from the school

and how they feel about the experience would be an excellent addition to this body of research. The questionnaire should also capture data regarding the training that the PE graduates had prior to commencing and once beginning their teaching could be compared and contrasted to ascertain if any differences in training, amount of training and type of training has an effect on graduate confidence and ability.

e. Focus group with graduate teachers to understand their 'lived experiences'.

Research that further examines the first year experience of graduate PE teachers in the workforce and their 'lived experiences' in working with students with a disability in a physical activity setting is also recommended. This research could follow the students who have completed the Inclusion and Diversity in Physical Activity unit to investigate if participating in the unit was helpful to the graduates and what further support they required. This information could be used to develop a suite of resources and professional development activities.

f. An audit of what inclusive resources are available to teachers, sport coaches, and schools in Victoria.

This audit would be a valuable piece of research as it could identify what is available for teachers, coaches and universities to access to support their learning and professional development. Identifying what is currently available to access, and then being able to recommend resources and activities, would be most useful to teachers seeking their own upskilling in this area. Further, this information could be shared via a providing access to a website available for all schools, universities and sporting organisations to access.

g. Investigate the support schools provide to new and established teachers when supporting students with a disability in mainstream classes.

Some of the conclusions of this research are the perceived importance of training for teacher self-efficacy, more favourable attitudes and teaching competency when working with students

with a disability. To encourage this occurring at a school level, priority must be given to ensuring that teachers have the appropriate training. Auditing school support, staff needs and professional development opportunities would facilitate understanding the best ways to support teachers in their endeavour to be inclusive for all students.

The above recommendations for future research build on the findings of the current study and extend the knowledge base in the area of inclusive practices in PE and sport coaching. Creating resources and professional development based on the needs of undergraduate PE teachers, practising teachers and coaches will enhance the opportunities for them to feel more confident, be better prepared, and further equipped to provide more inclusive activities for students with a disability.

Limitations

As with all research, limitations of this study must be considered. Given there were three distinct phases in the study, the limitations for each phase are detailed below.

Limitations of the Phase 1 quantitative study (PEATID-11 questionnaire)

The university where the research has been conducted uses a block model of delivery where each unit is delivered and completed within four weeks. Due to the implementation of this model, the unit in question was delivered three times over the 12-week period and as such, there were several data collection points for the *PEATID-11* questionnaire. To collect *PEATID-11* questionnaire data, there were three pre-unit collections and three post-unit collections. At these time points students were contacted by their facilitators via email and they also received announcements on the learning management systems inviting them to participate in the study. These communications led to many students participating; however, not all completed both pre and post-questionnaires. Ideally, all students would have been completing the unit at the one

time and there would have only been one pre and one post-data collection. Had this occurred, it may have resulted in more students completing both the pre and post-questionnaires.

Additionally, the undergraduate PE students were given time during class to complete the questionnaire. Some students used this time to complete the questionnaire while others may have completed it in their own time at home or elsewhere. To this end, it is noted that there may have been some element of social desirability bias (Cronbach, 1946; Guilford, 1950) when completing the questionnaire in class time. As the undergraduate PE students were completing the questionnaire with other students, they may have felt that they needed to answer in a particular way. Answering in a socially desirable way may have the desired effect of this unit to encourage students to be more inclusive. It is an element of the research that must be acknowledged. This was also acknowledged by Folsom-Meek and Rizzo (2002) in their study using the *PEATID-11* questionnaire. Furthermore, this research is consistent with Folsom-Meek and Rizzo's (2002) research, and does not address the assumption that the measuring beliefs and attitudes will predict behaviours and intentions.

The questionnaire data were collected via Qualtrics and was not paper-based. It was accessible to all students as each had a mobile phone, computer or other device to access the questionnaire. Accordingly, it was assumed that Qualtrics made the questionnaire more accessible to all students and allowed for students to also access this from home. In this instance, most students accessed the questionnaire via their mobile phones.

Limitations of the Phase 2 qualitative study (student focus groups)

Three focus groups comprised of a total of 22 students were interviewed for this research. Ideally, it would have been beneficial to have had more focus groups and a greater number of students interviewed. As with the organisation of any focus group, there are a number of factors to consider that may influence the outcome. Using situational factors proposed by Vicsek

(2010) of interactional factors, personal characteristics of the participants, the moderator, the environment, time factors and content are some considerations should be considered. When conducting the focus groups, the moderator was careful to ensure all participants were heard and had an opportunity to respond to questions. Additionally, the moderator was careful to ensure that the less confident of the participants felt comfortable to speak up. Adhering to the allocated time and providing a safe environment was also important to the success of the focus groups. Each focus group ran to schedule, beginning on time and concluding on time to ensure participants were not inconvenienced in any way.

As the primary researcher was the focus group interviewer/moderator, although not having taught the Inclusion and Diversity in Physical Activity unit during the year, some of the students interviewed had been taught in other units by the researcher. This may have influenced some of the interactions between the group and the interviewer. Most of the participants knew each other, as the interviews took place towards the end of the year and they would have had the opportunity to form personal friendships with each other. As the focus groups were open invitations to students to discuss their experiences, it is reasonable to assume that most students who did 'opt in' had had a fairly positive experience in the unit. This may have resulted in more positive responses from students to the questions.

As the moderator was the primary researcher, it was imperative to remain as objective as possible throughout the interviews. The same questions were asked, and in the same order, to ensure that moderator bias was minimised. All focus group members were read the same instructions and the moderator used the same prompts for each group. All members of the groups were given an opportunity to speak and all contributed to the discussion.

All of the focus groups were conducted at the university in a classroom. Two focus groups were held at one of the campuses and one focus group was conducted at a second university campus. The primary researcher endeavoured to ensure that the focus group opportunity was

as inclusive as possible by providing various locations and times that suited the students. All of the focus groups were held at midday, as this was a time that students were available and already on the campuses. Consideration was given to later times, but upon further thought, were not considered to be appropriate due to possible fatigue at the end of a long day.

Finally, students attending the focus groups were aware that the questions would be relating to their experiences in the Inclusion and Diversity in Physical Activity unit. Agreeing to be a part of the focus groups showed a willingness of the students to discuss their 'lived experiences' in this forum. The students were given an overview of the research and how the research may inform inclusive practices in the future. Motivation to be a part of the student focus groups is a consideration and may be a possible limitation of the study. As Bergen and Labonté (2020) indicated, SDB may play a part in how and why students volunteer to be a part of a focus group, as they may wish to be seen as socially acceptable. The primary researcher in this study found that there was a great deal of altruism in the responses from all groups.

With any research conducted in one country or area, one must also consider the limitation of cultural and societal biases regarding inclusive PE held by the participants of the research. Rukavina (2019) indicated that some PE teachers may be uncomfortable with diversity in PE as they do not fully understand their own culture and therefore biases. This is furhter explored by (Flory & McCaughtry, 2011) who found that in some cases, PE teachers expressed shock when working with some diverse student populations.

Limitations of the Phase 3 qualitative study (expert educators' interviews)

There were some restrictions regarding how this part of the research was conducted. Due to the COVID-19 worldwide pandemic and the subsequent lockdown of Melbourne, the city in which this research was being conducted, the expert educators' interviews originally planned to be in person were conducted via the online Webex platform. Changes were made, and approved, to

the Ethics Application to reflect this. Accordingly, the interviews were organised via email and conducted online and recorded with the participants' permission.

The interviews were conducted one-on-one, over Webex. The participants were all emailed the questions in advance to consider, as had been the intention with the planned face-to-face interviewing. Access to the Webex meeting was via a hyperlink and all participants were able to access the meeting easily. Some of the participants experienced some technical difficulties (microphone not working or not being able to hear the interviewer) but these were rectified quickly and without any real concern for the participants. A benefit to the Webex interviews was that the interview could be recorded (with permission) and used for later data transcription. Participants also indicated that they were prepared to be available via Webex and that, in some cases, it made it easier to participate due to lack of travel and taking time from work.

The value of being able to conduct the interviews face-to-face include building rapport with the interviewee and being able to read their body and facial expressions. While this can be done via an online interview, it can be less effective. However, the primary researcher believes that this was not an issue for the interviews conducted, with rapport established quickly and facial expression read easily.

Conclusion

This research was designed to examine, through a three-phase triangulated research design, the learning that PE students had through engaging in an inclusive PE unit during their undergraduate studies. The three phases of the research were able to bring together findings that clearly supported the need for an inclusive unit to be a part of undergraduate PE teacher studies and training for sport coaches, in order to create practitioners that had better attitudes towards students with a disability, better skills to provide students with an inclusive experience and better knowledge of how to do this.

The *PEATID-11* questionnaire data results showed that there is merit in undergraduate students completing an inclusive PE unit as it resulted in better attitudes towards working with students with a disability in a physical activity setting. What this research was also able to do was to examine the experiences that the students had while partaking in the inclusive unit and how they felt about working with students with a disability to further support the findings of the questionnaire. This study was able to demonstrate the value of participating in this inclusive PE experience in the students own words. Interestingly, Shah and Nair (2006) found that there was an assumption that in tertiary education the student voice would lead to improvements in actions or opportunities, and this is not always the case. Despite students adamantly articulating the benefits of inclusive PE training in this research, and other studies indicating the need for inclusive PE training, not all PE courses have inclusive PE training or units mandated or as core learnings.

The results of this study have established that the lived experience of students participating in the Inclusion and Diversity in Physical Activity unit, supported by the findings of the *PEATID-11* questionnaire pre and post-data and the expert educators' opinions, have indicated the value and importance of an inclusive PE unit with 'hands on' experiences for future PE teachers. As PE teachers play a pivotal role in the ability of students with a disability, and indeed all students, to be included in PE classes and sport, this research has demonstrated how, with good content, practical experiences and a commitment to being inclusive, that we can educate, empower and improve self-efficacy to be truly inclusive in our PE teachers and sporting coaches.

Specifically, this research has clearly demonstrated that participation in a well-constructed inclusive PE unit can support the professional development of undergraduate PE students through the establishment of favourable attitudes towards working with students with a disability. Units that are constructed with an applied 'hands on' approach to teaching, can

facilitate undergraduate PE students to have greater self-confidence, inclusive skills and knowledge about inclusive practices to apply when working with students with a disability.

Addressing a gap in the literature is important. This research details the undergraduate PE students' voices and clearly outlines how much they value the experiences in an inclusive PE unit. As educators in the tertiary PE field, it is important to listen to and understand what the undergraduate PE students need and value, and ensure that authentic learning experiences are provided for them around inclusion and diversity.

Each of the three phases of this research highlighted positive change can occur with education and experience. This change will support greater confidence in the ability to be inclusive. Participating in an Inclusion and Diversity in Physical Activity unit in which attitudes around inclusive practices are challenged, knowledge is improved and skills in modifying and adapting are honed, is paramount to developing well-rounded PE teachers and sporting coaches. A broadening of the cohort of inclusive PE teachers and sporting coaches confidently teaching and modifying physical activity in our schools and communities supports increased prospects to be inclusive, welcoming, and capable of offering all students successful opportunities to participate in physical activities.

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Appendices

Appendix 1 – Announcement to undergraduate PE students to request them to participate in the PEATID questionnaire

We are interested in exploring your experiences of working with students with a disability in a physical activity setting.

Are you able to help by answering a short qualtric survey this week? You can access the survey on your phone or computer -

https://survey.az1.qualtrics.com/jfe/form/SV_9EVlFlq1LYILGO9

Your support would be very much appreciated. The survey is being conducted by Mrs Loretta Konjarski who is a co-convenor of this unit.

Please let us know if you have any queries and again many thanks.

Appendix 2 – Initial email to undergraduate PE students to request them to participate in the focus group interviews

Dear student,

Thank you to those of you who completed the PEATID questionnaire. We are now looking for students who are able to be a part of a focus group to research into your experiences in the Inclusion and Diversity unit.

We are planning to hold the focus group interviews on Monday 30 September and Tuesday 1 October. (Week 1 of Block 3)**.** You will only be required to attend one session. The group interview will take place at Footscray Park and will go for approximately one hour. You will be with 4-6 other FYC students. Refreshments will be available for you.

We wish to thank you for giving up your time and thank you so much for supporting this research.

Please RESPOND to loretta.konjarski@vu.edu.au and let me know if the Monday or Tuesday suits you better and what time would be most suitable. Further information will be made closer to the date. Your input into this research will be invaluable.

Kind regards

Loretta

Appendix 3 Student Consent Form

CONSENT FORM FOR STUDENT PARTICIPANTS INVOLVED IN RESEARCH

INFORMATION TO STUDENT PARTICIPANTS

The aim of the study is to examine the lived experiences of Physical Education students undertaking a unit focusing on Inclusion and Diversity in Physical Activity. As a participant, you will be asked to provide consent, to complete an online survey, to provide some demographic information and provide a preferred contact if you would like to participate in the focus group section of the study. One of the researchers will then contact you to organise a convenient time to attend a focus group interview of approximately one hour with other fellow students to discuss your experiences in this unit. If you agree, the focus group interview will be audio-recorded and transcribed by the researcher. You will be provided with a copy of this transcript (unless you ask for one not to be provided), which you may amend to remove any information that you believe is identifiable. The results of this study will appear in a hard copy and electronic thesis publication and related papers.

CERTIFICATION BY PARTICIPANT

I,

_____

of

_____

certify that I am at least 18 years old* and that I am voluntarily giving my consent to participate in the study: Exploring perspectives of Physical Education student lived experiences in an experientially based Inclusion and Diversity unit, being conducted at Victoria University by: Loretta Konjarski, Associate Professor Anthony Watt and Dr Janet Young.

I have been invited to take part in the research project specified above. I have read and understood the Explanatory Statement and I hereby consent to participate in this project. I understand that the project is voluntary. I understand that I will be provided with a transcribed copy of my interview that I may amend to remove information that I believe may identify me. I also understand that I can withdraw at any point prior to approving my interview transcript. I certify that the objectives of the study, together with any risks and safeguards associated with the procedures listed hereunder to be carried out in the research, have been fully explained to me by Loretta Konjarski and that I freely consent to participation involving the below mentioned procedures:

I agree to be interviewed in a focus group by the researchers Yes No

I agree to allow for the focus group interview to be audio-taped Yes No

I certify that I have had the opportunity to have any questions answered and that I understand that I can withdraw from this study at any time and that this withdrawal will not jeopardise me in any way.

I have been informed that the information I provide will be kept confidential.

Signed:

Date:

Any queries about your participation in this project may be directed to the chief investigators Associate Professor Anthony Watt Anthony.watt@vu.edu.au and Dr Janet Young janet.young@vu.edu.au .

If you have any queries or complaints about the way you have been treated, you may contact the Ethics Secretary, Victoria University Human Research Ethics Committee, Office for Research, Victoria University, PO Box 14428, Melbourne, VIC, 8001, email researchethics@vu.edu.au

Appendix 4 Email to experts

Dear Insert name,

I hope this email finds you well in this extraordinary time.

I am writing to you to invite you to be interviewed as part of my Doctoral research into the lived experiences of Physical Education students undertaking a unit focusing on Inclusion and Diversity in Physical Activity.

As an experience leader in this field, I am sure that your contributions will be valuable and important in this research and your insights will provide important additions to the body of knowledge. As a PE trained educator with many years of experience you will be able to add some real perspective to the study.

I was planning to conduct the interviews face to face, but as you are aware, in the current COVID 19 situation this is not possible, and I will be now conducting the interviews remotely via Webex. These interviews will be recorded to later be transcribed. You will be provided with a copy of this transcript (unless you ask for one not to be provided), which you may amend to remove any information that you believe is identifiable.

I would like to conduct these 30 minute interviews sometime at your convenience in the week beginning July 6 this year. I have blocked out Wednesdays to conduct these interviews. If you have a spare 30 minutes on either Wednesday July 15, 22 or 29, please email me with your preferred time and I will book in a time for us. If you cannot make time on a Wednesday but would still like to be involved just let me know days and times that suit you and I will try to accommodate that.

The questions I will be asking as part of the interview are listed below for your information and consideration.

Teacher Interview questions:

1. What experience, if any, have you had working with people with a disability?
2. Have you had a child/children with a disability in your mainstream classes?
3. Did you feel adequately prepared to deal with this students and provide the best opportunities for that child/children?
4. Do you feel that there is adequate training for teachers working with people with a disability in mainstream settings?
5. Do you feel that it is the responsibility of University's to give training to undergraduate teachers before the completion of their degree?
6. What, if any, training is provided to teachers by your organisation once they are employed?
7. What training would you have liked to have received as an undergraduate in the area of working with children with a disability?
8. How important do you feel that training and experience in working with children with a disability is? Why?
9. Is there something that you would like to share or that you think would be important to include that has not been covered?

Kind regards,

Loretta

Appendix 5 Expert Educator Consent form

CONSENT FORM FOR INDUSTRY PARTICIPANTS INVOLVED IN RESEARCH

INFORMATION TO INDUSTRY PARTICIPANTS

The aim of the study is to examine the lived experiences of Physical Education students undertaking a unit focusing on Inclusion and Diversity in Physical Activity. As a participant, you will be asked to provide consent to participate in a one-on-one interview with a researcher to provide your point of view on the importance of an Inclusion and Diversity unit in an undergraduate Physical Education degree. If you agree, the interview will be audio-recorded and transcribed by the researcher. You will be provided with a copy of this transcript (unless you ask for one not to be provided), which you may amend to remove any information that you believe is identifiable. The results of this study will appear in a hard copy and electronic thesis publication and related papers.

CERTIFICATION BY PARTICIPANT

I,

_____

of

_____

certify that I am at least 18 years old* and that I am voluntarily giving my consent to participate in the study: Exploring perspectives of Physical Education student lived experiences in an experientially based Inclusion and Diversity unit, being conducted at Victoria University by: Loretta Konjarski, Associate Professor Anthony Watt and Dr Janet Young.

I have been invited to take part in the research project specified above. I have read and understood the Explanatory Statement and I hereby consent to participate in this project. I understand that the project is voluntary. I understand that I will be provided with a transcribed copy of my interview that I may amend to remove information that I believe may identify me. I also understand that I can withdraw at any point prior to approving my interview transcript. I certify that the objectives of the study, together with any risks and safeguards associated with the procedures listed hereunder to be carried out in the research, have been fully explained to me by: Loretta Konjarski and that I freely consent to participation involving the below mentioned procedures:

I agree to be interviewed by the researchers Yes No

I agree to allow for the interview to be audio-taped Yes No

I certify that I have had the opportunity to have any questions answered and that I understand that I can withdraw from this study at any time and that this withdrawal will not jeopardise me in any way.

I have been informed that the information I provide will be kept confidential.

Signed:

Date:

Any queries about your participation in this project may be directed to the chief investigators Associate Professor Anthony Watt Anthony.watt@vu.edu.au and Dr Janet Young Janet.young@vu.edu.au

If you have any queries or complaints about the way you have been treated, you may contact the Ethics Secretary, Victoria University Human Research Ethics Committee, Office for Research, Victoria University, PO Box 14428, Melbourne, VIC, 8001, email researchethics@vu.edu.au