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To cite this article: Helen M. Bourke-Taylor, Claire Cotter, Aislinn Lalor & Lindy Johnson (2018) School success and participation for students with cerebral palsy: a qualitative study exploring multiple perspectives, *Disability and Rehabilitation*, 40:18, 2163-2171, DOI: [10.1080/09638288.2017.1327988](https://doi.org/10.1080/09638288.2017.1327988)

To link to this article: <https://doi.org/10.1080/09638288.2017.1327988>

 Published online: 19 May 2017.

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RESEARCH PAPER



# School success and participation for students with cerebral palsy: a qualitative study exploring multiple perspectives

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## ABSTRACT

**Purpose:** This qualitative study investigated perceived successful school experiences for students with cerebral palsy in Australia. Participation and appropriate support in school are complex concepts, although few studies have investigated all stakeholders' perspectives.

**Methods:** Phenomenology informed the study that centered on the concept of a successful school experience. In-depth interviews occurred with students ( $n=7$ ), parents ( $n=11$ ), teachers ( $n=10$ ), school principals ( $n=9$ ) and allied health practitioners ( $n=10$ ) to gain the perspective from multiple vantage points. Specific research questions, interview guides and demographic questionnaires were configured for each group. Interviews were analyzed thematically within and between groups.

**Results:** Three key themes emerged: Collaborative partnerships between families, schools and outside organizations; School culture and attitude is key; and, allied health practitioners are part of home and school teams.

**Conclusions:** Student and school success was impacted substantially by the capacity of adults in the student's life to collaborate – family, school professionals and allied health practitioners. An inclusive school culture was crucial to students with cerebral palsy. All parties needed to prioritize promotion of an open and positive school culture built around problem-solving inclusive practices. Involved people, such as allied health practitioners, bring knowledge and skills that are not otherwise readily available in school environments.

## ARTICLE HISTORY

Received 25 October 2016

Revised 2 May 2017

Accepted 4 May 2017

## KEYWORDS

Cerebral palsy; education; inclusion; allied health

## ► IMPLICATIONS FOR REHABILITATION

- Students with cerebral palsy have high needs at school and allied health practitioners have a role advocating for, educating and providing support to students within the school.
- Teachers of students with cerebral palsy need education, training and support from allied health practitioners.
- The need for allied health and rehabilitation services continues for children and youth with cerebral palsy outside of school and across the schooling years.
- School professionals; allied health practitioners; families and students can work together to improve the student experience

## Introduction

Across developed countries, adults living with cerebral palsy (CP) have reduced educational achievement, economic independence and social inclusion compared to other adults with a disability [1,2]. Postsecondary outcomes, such as tertiary study, and supported or general employment, are known to be substantially below age-matched people without disabilities, making children with disabilities an at-risk group and adults with disabilities a disadvantaged group [2,3]. The school years are a key developmental period when children and young people with disabilities learn both academic skills and life skills. Achieving social and economic participation on par with other members of the community is only possible for children with disabilities if they can commence life with appropriate educational opportunities [3,4]. Research indicates that schooling can

be fraught for children with disabilities, due to lack of teacher training [5], lack of support for a full educational and social experience [6–8], physical and attitudinal barriers [9] and bullying and harassment [5,10].

Many developed countries have education policies that promote inclusion in education settings, although the existence of legislation that makes support for students with disabilities mandatory is variable [4,11]. Policies and laws that promote equal access to education are difficult to enforce without enactment legislation that mandates a service or other provision [12]. Many developed countries have ratified with the United Nations and adhere to the Convention on the Rights of Persons with Disabilities (including children with disabilities). The charter stipulates that students with disabilities must have equal access to an appropriate and meaningful education on par with non-disabled students [12].

Research into the support required to ensure equitable access to education for students with CP within classrooms, schools and communities has rarely been studied relative to the importance of school in the lives of people with CP. Although postschool opportunities for young people with CP are limited, adolescents ( $N=431$ ) in a large multicity European longitudinal study identified school as a satisfying place to be [13]. Some five years previous, parents of the children (aged 8–12 years), identified home, school and community environmental enablers or barriers using the European Child Environment Questionnaire [14]. The research reported significant differences for children across geographical location (European countries) in terms of attitudinal and physical school environments, with children with greater physical and or intellectual impairment also being rated as having less access to school environments and rated as needing but not having access to supports such as: enough time to complete tasks; being encouraged and supported by peers in the classroom; teachers understanding CP; aides and devices at school [15]. The actual participation of students with CP in schools is more difficult to measure and consequently what constitutes sufficient and effective support difficult to enact. As highlighted by Colver et al, if students had access to appropriate supports as needed and in line with the United Nations Convention, the extent of disability would not be related to unmet needs across environments [15].

The current paper describes a research project that occurred in Victoria, Australia. Although law and government policy in many countries such as Australia promote inclusion, parents and students continue to report that there remains either overt or covert resistance in many school communities [16]. As described by Faulkmer et al, “The right to be present in a school is not enough to call it inclusive” [17]. Successful school experiences are reliant on students being included and participating socially, academically and in all ways similar to other students.

The aim of this research was to explore successful school experiences and the participation of students with CP in mainstream schools. To identify participants, successful school experiences were broadly operationalized to be subjectively assessed as a positive, enjoyable, involved and educational experience for the student. As asserted by Bines and Lei, much is required to identify and disseminate “what works” in relation to inclusion [4]. Overall research questions relevant to this paper were as follows:

1. What contributes to a successful school experience for students with CP?
2. What do schools do to achieve a supportive environment for students with CP to report success?
3. What do different people (students, parents, teachers, principals, allied health) identify as common key characteristics of successful inclusive schools?

## Methods

A phenomenological qualitative methodology enabled investigation and description of what contributes to a successful school experience for students with CP in Victoria, Australia. Lived experience through interviews of students, parents, allied health practitioners, teachers and principals was sought. The phenomena under study were self-described successful school experiences from the perspective of groups of key persons. A multipronged perspective enables the researcher to construct the phenomena from a broad vantage point. As Creswell [18] asserted, qualitative methods necessitate deconstruction of preconceived ideas about a phenomena (success at school for students with CP) and reconstruction based on an inductive research process.

## Recruitment and participants

Purposive sampling occurred through Cerebral Palsy Education Centre (CPEC), a not for profit center for children/young people and their families. CPEC provides statewide support to 50 students with CP in any year and is a specialty center with developed responsive services to support students with CP in local school and community. Services include after school therapy programs; face-to-face education workshops to teachers and school personnel; online educational packages for teachers; therapy services that outreach to schools; parent support to prepare for and support their child’s attendance at local school. Researchers were blinded to the identity of potential participants as the distribution of information about the opportunity to participate was managed by CPEC. Information sheets and consent forms were distributed to 70 children with CP (past and current CPEC service users), their families and 46 schools inviting them to participate. All schools had at least one enrolled student with CP and the student received CPEC services. Similarly, all 21 CPEC allied health practitioners were invited to participate and their identity was confidential to all except the university researchers. Allied health practitioners from the disciplines of occupational therapy, physiotherapy and speech pathology were employed by CPEC, although delivery of services to children with CP in schools was funded by either schools or parents. In line with Victorian state policy, no students in the study had related allied health service providers in school.

All participants provided informed consent. Students provided personal and parental consent, and teachers provided consent personally and from their school’s principal. The final participant group included 47 people (Table 1). Ethics was sought and approved from Monash University Human Ethics Research Committee, the Victorian Department of Education and Early Childhood Development and the Victorian Catholic Education Office.

## Data collection, management and analysis

Individualized semistructured interview guides (Table 2) were constructed in relation to tailored research questions for each participant group to collect data. All guides were piloted with people who fit the participant’s group inclusion criteria, none of whom participated in the study. Data were analyzed using an indicative process (Table 3), with research questions guiding identification of important and relevant descriptions, as applied in previous qualitative studies investigating phenomena [18–20].

Only university researchers were involved in data collection and data analysis. Interviews were recorded, transcribed verbatim and reidentified by the first author. Data were analyzed systematically using manual means and NVIVO. The data analysis process was structured and records scrupulously kept, ensuring replicability of the study. The process is presented in Table 3 and highlights reading verbatim transcripts through to summary of six overarching themes. This research paper presents three themes related to the research questions described.

## Results

Successful school experiences were described by students, parents, teachers, principals and allied health practitioners. Various described, success meant that a student wanted to go to school, felt they were getting an education at school, were welcome, and connected. Three overarching derived themes with subthemes are presented here.

Table 1. Summary of participant's characteristics organized into groups.

Participant group (N = 47)			Characteristics of five participant groups	
	Age range	School situation	Capability/disability	
<b>Students with cerebral palsy (n = 7)</b>				
Rochelle	9–12 years	Attends local schools full time with aide	GMFCS level III; MACS level II; Verbal speech; Visual impairment	
Katherine	6–8 years	Attends local school full time with aide	GMFCS level V; MACS level V; CFCS level IV	
Elisa	9–12 years	Attends local school full time with aide	GMFCS level III; MACS level II; CFCS level IV; Some challenging behavior	
Max	13–16 years	Attends local school full time with aides	GMFCS level IV; MACS level IV; Verbal speech	
Samantha	13–16 years	Attends local schools full time with aides.	GMFCS level V; MACS level V; CFCS level III; Chronic pain	
Sophia	17+ years	Attends vocational education facility part time with aide.	GMFCS level V; MACS level IV; CFCS level III; Hearing impairment	
Thomas	17+ years	Attends local school full time, no aide.	GMFCS level I; MACS level II; Verbal speech	
<b>Parents (n = 10)</b>				
<b>Work</b>				
Mother A	Part time	<b>Child's schooling</b>	<b>Child's care needs</b>	
Mother B	No paid work	Primary school	Independent: walking indoors, using hands, talking.	
Mother C	No paid work	Primary school	Dependent all self-care activities of daily living.	
Mother D	No paid work	Secondary school	Dependent most self-care activities of daily living – able to eat and drink.	
Mother E	No paid work	Primary school	Dependent all self-care activities of daily living.	
Mother F	Part time	Primary school	Independent mobility. Requires some assistance for most self-care activities of daily living.	
Mother G	Part time	Secondary school	Dependent all self-care activities of daily living.	
Mother H	Part time	Primary school	Independent most self-care activities of daily living – assistance needed with dressing, showering.	
Mother I	No paid work	Primary school	Dependent all self-care activities of daily living.	
Mother J	Part time	Post school	Dependent all self-care activities of daily living.	
<b>Teachers (n = 11)</b>				
<b>Years teaching with students with disabilities</b>				
Teacher A	2	Years teaching with students with disabilities	Formal continuing professional development related to CP	yes
Teacher B	7			no
Teacher C	2			no
Teacher D	20			yes
Teacher E	8	First year		no
Teacher F	12	3		yes
Teacher G	4	2		no
Teacher H	2	First year		no
Teacher I	23	First year		yes
Teacher J	3	First year		no
Teacher K	8	3		yes
<b>Principals (n = 9)</b>				
<b>School type and student numbers</b>				
Principal A	Local Urban Primary (~500 students)		<b>Experience with students with disability and professional development.</b>	More than 25 years teaching with ten years as principal with students with disabilities in school. Related additional degree.
Principal B	Local Urban Primary (~250 students)			More than 20 years teaching and professional development in area of students with disabilities.
Principal C	Local Suburban Primary (~400 students)			More than 30 years teaching and many years as assistant principal with students with disabilities in school.
Principal D	Local Suburban Primary (~450 students)			More than 15 years teaching. Related additional degree.
Principal E	Local Urban Primary (~400 students)			More than 30 years teaching and seven years as assistant principal with students with disabilities in school.
Principal F	Local Suburban Primary (~400 students)			More than 30 years teaching with seven years as principal with students with disabilities in school.
Principal G	Local Suburban Primary (~250 students)			More than 30 years teaching and 3 years classroom teaching students with disabilities. Professional development in area of students with disabilities.
Principal H	Local Suburban Primary (~250 students)			More than 30 years teaching with more than 10 years as principal with students with disability.
Principal I	Local Rural Primary (~200 students)			More than 20 years teaching with several years as principal with students with disabilities in school.

(continued)

Table 1. Continued

Participant group (N = 47)		Characteristics of five participant groups		
Allied Health Practitioners (n = 10)	Years of experience working with children with disabilities and their families*	Cerebral Palsy Education Centre (CPEC) mentoring and transdisciplinary training.	Professional development working with students with disabilities. Professional conferences and workshops specific to students with disabilities.	CPD-specific skill certifications for technical/technology/therapeutic skill development
Physiotherapist A	5-10	✓	✓	✓
Physiotherapist B	1-5			
Physiotherapist C	1-5	✓	✓	✓
Physiotherapist D	5-10	✓	✓	✓
Occupational therapist A	1-5	✓	✓	✓
Occupational therapist B	5-10	✓	✓	✓
Speech pathologist A	>10	✓	✓	✓
Speech pathologist B	1-5	✓	✓	✓
Speech pathologist C	1-5	✓	✓	✓
Speech pathologist D	>10	✓	✓	✓

\*Range of years provided to de-identify therapy staff.

### Theme 1 collaborative partnerships between families, schools and outside organizations

All participants discussed the importance of collaborating for student, family and school success. Physiotherapist C described attitudes to collaboration that helped, including "positive attitude, willingness to learn, willingness to take things on-board, flexibility. Flexibility is huge. Patience is really key." Principal H discussed the linkage between schools, parents and outside organizations:

The first part of it is the family and school co-operation and communication working together ... this family came in ... and had lots of information, obviously because they've lived with the child since birth ... freely sharing it and helping to make those early connections with places like CPEC ... it is vital to do that.

#### Being proactive from the start

Many parents and school personnel described being proactive with schools and making contact before their child enrolled and commenced school. Being proactive from school enrollment created a more receptive and understanding school community that was more favorable for the student and family. Although parents described preparing the school, Mother I also acknowledged that it took courage and confidence to approach a school in this way: "[Parents] need to be proactive and confident about going in there. So I think that was critical at the start." The impact of early family involvement on schools was enormous, as described by a principal below:

I was contacted by the mother mid last year and she had been told at the time she needed to really work towards a transition ... plenty of notice so we could put things into place. The child is in a wheelchair so we needed to have ramps ... The mother was really positive and I think by working with her, we've forged quite a good connection. (Principal B)

#### Parents have a wealth of knowledge to share

The knowledge and skills of parents contributed to the inclusion of students.

Participants from all professional groups acknowledged the wealth of knowledge that parents shared. Parental involvement was described by Principal A as "just crucial. They need to be the advocate for the child ... the parent really has known that student or that child since the beginning, so they know them the best." Teacher I commented that tapping into parents skills required "an open door policy with families and it's a partnership and we could not have integrated him into our program as successfully without parent support and involvement." While occupational therapist A confirmed:

Parents play a massive role in supporting school staff. They play a massive role in training and teaching ... because they're in there every day. I'm in once a fortnight, once a month ... they're also part of the advocacy for their child ... a key role for a successful outcome is their involvement and support of staff and the school.

#### Families coordinate and work behind the scenes

In addition to helping in the classroom and upskilling teachers and aides, parents coordinated and organized behind the scenes. Examples included preparing resources for other parents in their child's class that would increase understanding of their child's differences. Speech pathologist C described how parents "will write to other parents. So when [other] kids go home and ask questions, [other parents] know what to say ... Questions that kids ask that sometimes can create a barrier. It's nice when [other] parents know, because misinformation is like a devil!"

Parents also assisted with homework, fitting required academic tasks into what was usually a busy after school schedule of

**Table 2.** Brief examples of semistructured interview questions for all participants groups.

Participant group	Sample questions
Students	What is your favorite activity at school? What sort of help do you have to do the activity? Who helps you? How do they help you? What equipment helps you to be able to do activities at school? How does it help?
Parents	Are you able to go into and use all of the places at school in the same way that other kids in your class can? We are interested in what you consider to be a successful school experience for (child): How would you describe success at school for your child? What is crucial and what is optional for (child) at school? Considering all of the school supports, services and staff contributions to (child) current school experience, what are the most influential factors?
Teachers	What promotes good parent-school relationships? Please explain how the student participates in the following classroom activities: writing activities; reading/literacy activities; mathematics; other? Please explain how the student manages in tests or examinations.
Principals	Ideally, what does successful school inclusion look like for you in terms of students with Cerebral Palsy? Describe how you view your role with the successful inclusion of students with CP at school? Can you please describe the role of parents in promoting their child's success?
Allied Health	What do you see as the main indicators that a child is benefiting and enjoying school? Describe the way(s) you work in a school to support the education of a student. What are the factors in school communities that seem to lead to more successful inclusion?

**Table 3.** Data analysis process from transcribed interviews through to deriving six overarching themes over 12-month period.

Stages	Major data analysis activity occurring at stage	Number of researchers involved
1	Three researchers read and reread 47 interviews within participant groups. Cleaned interviews sent to participants for verification.	3
2	Two researchers read 47 interviews and identified rich text that was highlighted with key concepts identified to label like concepts and representational quotes.	2
3	Interviews with identified text and key concepts sorted into six participant groupings. Two researchers identified concepts and categories of like concepts to create category maps for all participant groups separately. Category maps identified like concepts and drafted potential relationships between concepts within each group, (e.g., In the parent group of interviews, a "supportive school culture" relied on a school principal with an "open attitude and welcoming feel" and "friendly school community of families").	2
4	First-stage analysis completed: Three researchers converted category maps into "nodes" within each participant group in NVIVO. All interviews were reread and analyzed within NVIVO and assigned to the within participant groups "nodes" representing themes and subthemes. This stage was finalized when all interviews were analyzed and assigned nodes.	3
5	Second-stage analysis completed: Three researchers agreed on overall themes and subthemes derived through a method of constant comparison between interview data from all participant groups. Thematic saturation occurred through constant comparison after no new concepts emerged from within one interview, within one participant group and across groups. Six overarching representational themes were finally derived. The stage was finalized when key representational quotes were identified from within each participant groups as a common view or a contrasting view.	3

activities or medical and therapy appointments. Mother C described the struggle to keep up with set homework and work that could not be completed in class due to the extra time their child needed, saying that homework was "pretty constant... we don't have a lot of time and it does take us a lot longer, double the time at least..."

### *Support for families*

Schools and allied health practitioners recognized the importance of support for families. Schools acknowledged the difficulty of the role of parents, such as Principal F, "That's something that we have really worked hard on that we don't walk in the shoes of our families, so we can't judge." The team that supported many students with CP, and other needs such as medical care or complex communication needs, was large and included the family:

[He has] two integration aides and he has his three therapists, he's got a speech therapist, his occupational therapist and his physiotherapist...his family as well, his mum puts in a lot of time... there's a very large support team. (Teacher K)

Parents talked about the role of outside agencies that included allied health practitioners and the long term relationships that made their tasks easier:

When we first started [at CPEC] they really trained us as parents, how to advocate for [my child's] needs... .And to, to have a high expectation of what... inclusion looks like... (Mother I)

Allied health practitioners noticed that schools also contributed to the support of parents:

It seems to me that the parents feel [happy to send their child with CP] to school, they see benefit in sending the child to school, they see it as a good use of time for their child; they feel that the child is safe within the school environment and will be looked after. It's a real positive shift within the family. (Physiotherapist A)

Even though parents, students, schools and outside agencies acknowledged and valued the role of parents, there was universal discussion about the difficulties associated with parents providing support to schools to assist their child. The pressure of needing to be very involved with their child's education caused difficulties for some parents. It is important to acknowledge the extent of support that schools needed and received from parents. As described by Mother I:

It's heavy. Over the years it's been, like we're in a really good spot now. It's running like clockwork, but look, there have been different issues every week. I need to be available to problem solve, and, on a regular basis. [As a parent] you have to be dedicated to the idea and if it's the right thing, you have to have time to make it work.

### ***Theme 2 school culture and leadership is key***

All participant groups upheld the substantial influence of an inclusive and welcoming school culture and leadership that enabled and valued everyone in the school community.

### **Leadership**

Strong school leadership had a positive flow on effect for school staff, students and the whole school. All principals and teachers interviewed agreed that leadership that impacted the culture of the school was paramount:

My role is first and foremost to work around the culture of the school...ensuring that we have a culture and an environment in the school where everyone feels welcome and accepted, and that their child is going to be included like everyone else. (Principal C)

Success doesn't look the same for everyone...we want children to experience the joy of learning, to be curious, to be engaged, to be actively learning, to feel that they're a part of the classroom, that they can ask questions, ... and that they can take risks and they don't have to get things right all the time. So that's the culture that we want, the learning culture that we want for every child and I think that for a child who has got disabilities, it's really, really important. (Principal I)

Parents used different terminology to describe how they felt in a school with inclusive practices, as described by Mother A "they were just quite open and they have a Vice Principal who's dedicated to working with the children that need additional assistance...the school itself just feels a bit nicer in the community spirit." Other parents were concerned that enough staff needed to be available, such as Mother H "I'd make sure that the school has the correct attitude, that they're willing to have the child there and that they have enough staff..." Allied health practitioners also felt differences in the schools that they visited when providing services as described by Occupational Therapist A:

The principal's got [to have] a good attitude to supporting students with disabilities and working on ways of making inclusion successful. That actually filters down to the rest of the staff...Some do it better than others.

### **Commitment to the education of staff**

Inclusive practices meant that staff, parents and allied health practitioners were confident that school staff would be trained and assisted to learn how to better meet the educational, social, physical and self-care needs of students with CP. Teachers discussed the importance of attending professional development training before the student came into the class and also observing the student in a current class to prepare for the future. Teacher K discussed preparation for her student's new teacher: "and he started to be trained up on all of that for when he takes over. He will also come in and watch what we do in here". Teachers acknowledged their own need for training and learned from specialists who came into the school, as well as attending outside training:

We've had training with the speech therapist and the occupational therapist and the physiotherapist. They came in and the parents attended and filled us in on what was happening in the background. I've done professional development; the aides have done professional development at CPEC. (Teacher D)

### **School is receptive and welcoming to student, family and allied health**

All of the students interviewed enjoyed most aspects of school, had some friends and were able to talk about what they liked at school. Similar to other primary school students, Katherine and Rochelle liked recess with friends, Sophia liked art and Max liked science and cooking the best. Sophia commented on friendships and the attitudes of peers when the school culture was supportive when she described "The students that were in my grade, they were absolutely fun to be with and made school enjoyable."

Principals made planned and purposeful attempts to show parents that they were welcome and so was their child: "When

parents come to the school for meetings with me or tours of the school, one of the first things that I'll always say is that we are an inclusive school." (Principal Ms F). Allied health practitioners also noticed when schools were receptive to their input, as occupational therapist A stated:

I think [teacher] willingness to ask questions and taking the time to have a chat with you [OT] when you're in...Being able to touch base and a willingness to have therapists in their classroom...there are some schools you go into and therapy has to happen outside the school... So it's not actually seen as part of a support to help that child to be at school and to participate...

### **Environment is modified to accommodate students individualized needs**

In this sample of students, parents, principals and teachers, most schools were able to accommodate physical accessibility. Students talked similarly to student Sophia who commented "the accessibility at my school was very good. They had ramps everywhere and there were no areas I couldn't get to." Max described school access:

I like most of the stuff at school like the subjects and how I get around places...They have like ramps so you can access more areas, when you go to like have lunch...some [places] I can't [get to] because they might be up a hill or they might be in places that are impossible for me to get to.

Mother J described that "Both schools that [my son] went to were wheelchair accessible." Samantha's mother described that

...the whole school has been modified with the exception of the oval...and there's [student 1] and there's [student 2], so there's three of them that are wheelchair users, so the whole school has basically been set up that anyone can get anywhere... it's actually incredibly wheelchair friendly isn't it? You go everywhere don't you? Samantha agreed: Yes

In contrast, although some areas were accessible for Rochelle, the student described an inability to get to a lower grassed area and playground where her friends would play and instead talked to her adult aide during recess.

### **Problem-solving attitude within class and whole school**

All participants appreciated recognition that there were no straightforward answers as to how to facilitate a student's access into schools physically, academically and socially. While some issues were easily addressed (like seating in class or requesting a bus with wheelchair access for excursions), other solutions were arrived at after a trial and error process that the whole team around the child participated in. Parents appreciated that schools did not have all of the answers to their child's education and as described by Mother E, "[The school said] 'Yes we'll give it a go, see how it works and if that's what [your child] needs then we'll try our hardest' and look that's all I ask as a parent, just to give it a go."

### **See child as an individual who will learn**

Associated with other subthemes and entwined within concepts such as involved parents, an inclusive school culture, strong school leadership, capability within the school to adapt and problem solve ways to assist students, was the central understanding that children with CP do learn. Learning and participation was seen as valuable, even though learning was often different to other children and required more time, modification and planning. As described by Principal F, "Inclusion is about not noticing the disability but focusing on the ability...The modification of things that need to be modified, to ensure inclusion...the planning for

friendship, social, emotional growth, the planning for differentiation and modifying what needs to be modified and a team approach. So it takes our whole school to care for our kids”.

Therapists and some teachers also noted the effort required on behalf of students who may have found many tasks to be difficult due to physical or communication differences. Physiotherapist A described success at school as simply the result of “a real celebration of this is what the child can do, rather than this is what they can’t do.”

### ***Theme 3 allied health practitioners are part of the home and school team***

Allied health practitioners had different levels of access to the students in schools and were reliant on funding and a receptive school environment to provide services in school and in the classroom.

#### ***Working together, advising, responding***

Allied health practitioners were familiar with each other’s skills, communication methods and knowledge of strategies to assist children to access school and also prevent problems. Physiotherapists, occupational therapists and speech pathologists advised each other and school staff. Occupational Therapist A stated:

I think having a really collaborative team, OT, speech and physio... regular contact about what’s happening and making sure that you’re working collaboratively ... It’s also really important for the school to have an open mind about what’s possible... The schools that are generally willing to give things a go tend to find a solution that works quite well for them.

School staff identified allied health practitioners as helpful and useful team members, such as Principal A:

For our more complex students... we rely enormously on Allied Health. If a child’s non-verbal then we really need our speech pathologist to be giving us some really good professional learning and strategies and to be working with us to make sure the staff are trained in the best approach. So Allied Health is really, really important.

Students identified allied health practitioners as a support, as demonstrated by Thomas who advised parents of younger children with CP: “Just push your kids to be able to do what you think they can do because they can. You know, I don’t think I would be in the best condition if it wasn’t for mum and for dad pushing me through the physio, through the OT... through some sort of physical activity... I think that’s something I need to thank them for”.

Parents were also supportive of the contribution that allied health practitioners made to their child’s access in schools providing “as much as they can to help the [classroom] aides put into place things in the classroom so that the students are having experience of movement, of proper seating, getting out of their wheelchair, being more actively involved in the classroom so that they can be using their therapy in constructive ways in the classroom” (Mother J)

#### ***Knowing the child***

Parents appreciated having allied health practitioners available to consult and assist their child at school, particularly when the therapist knew their child from early intervention or external community services. For many of the parents, choosing a center like CPEC, that provided service from early in the child’s life and also support across the school years, made life smoother for their child and family. Elisa’s mother described “For her therapy needs, we

go to CPEC weekly. She has physio weekly and then speech therapy or occupational therapy on a fortnightly basis and they also come out to the school... speech therapist comes fortnightly ... OT fortnightly ... physio monthly to the school ...”

#### ***Enabling across school and home***

Similar to knowing a child across time, therapists, parents and students identified that therapists often knew how the child best functioned across multiple environments including home, school, community and at the therapy center. Therapists and parents could translate that knowledge to the school environment with greater ease. Further, families and therapists felt more able to describe what their child could do and also what they needed in order to be enabled to participate at school. Speech Pathologist B explained why knowing a child in different environments was useful to all:

CPEC services provide an after school program and so our kids who are in school can come back and access that program and they can do an hour of a communications session where there are goals set out at the beginning of the year or at the beginning of the term. Because a lot of our therapists are involved with the children in schools, we have a good idea about how we can marry up their goals with what they need in schools.

#### ***Allied health practitioners contributing to capacity building in schools***

School staff made many comments about the contribution that allied health practitioners made to the ability of the school to better accommodate students with physical disabilities; teacher understanding about how to problem solve and use the expertise of allied health; and to the inclusive educational experience of specific students. The opinion of one principal was representative of many education staff:

... human resources are critical to successful inclusion and I believe we’ve got an amazing team. They’re positive... We’ve put the professional learning in, we’ve had [allied health] come out, we’ve had teachers go places, we’ve had communication, we’ve had peg [percutaneous endoscopic gastrostomy] training... having people come out, the physios and the OTs needs to be part of inclusion. I can’t see that you would have a child in a mainstream classroom without that. So those sorts of things are imperative and they shouldn’t be negotiable, it just should come. (Principal D)

Teachers gave examples of how they learned from OTs, SPs and PTs:

They [OT, SP, PT] come in and they’ll do activities with him and their goals are the same as our goals... They visit three or four times a term. It’s good. It was especially helpful at the beginning, now it’s more like a check in to see how he’s going and how everything is... They provide strategies and things that can help, that I can do with the whole grade that helps with inclusion, things that we can do just so that he’s not the only person doing that. (Teacher A)

#### ***Allied health practitioners contributing to learning and participation***

Further to school environment changes and enhancing the knowledge and skills of the professional community at schools, the therapists interviewed also directly contributed to classroom learning and participation in curricular activities. SPs described bringing communication methods that enabled children to communicate with anyone at the school. Speech pathologist D noted that all therapists needed to “have something to add” and bring “a real collaborative skill” to work directly with teachers in the classroom. Further, speech pathologist A added that with regard to students who were nonverbal, SPs needed knowledge “of the possibilities

to support that individual's participation...they have to know about AAC [augmentative alternative communication] language...to bring knowledge to support that school team and that's our function...we do have to know how curriculum works and how schools work." Teacher A described the assistance one of the female students received, stating that the "speechie [SP] offers quite a lot of information in regards to her curriculum, [SPs] are very helpful. Ideas about how we should modify things for [the student]. Being new to it, and I haven't taught someone with CP before, so [the SP] has been really helpful."

Therapists described their need to view a student and work with a student within the classroom environment. Physiotherapist A acknowledged that there was "a bit of negotiating going on with the classroom teacher" for therapists to be in class, but also asserted:

If you're trying to problem solve PE [physical education] there's no better time to problem solve PE than in PE. If you're trying to problem solve an active transfer or how you get from your class chair to your walker, or your class chair to your standing frame and it always happens in the classroom with lots of other children around, that's when you're best to do it because then you're actually seeing how the child performs when there are multiple distractions going on. (Physiotherapist A)

Students described situations where teachers and allied health practitioners worked together to assist them to participate in class. Sophia enjoyed art and woodwork and described what happened:

My first woodwork teacher didn't want me in class. She was very, very worried because she thought I was going to hurt myself or someone. She was the Health and Safety Officer. In year eight, my woodwork teacher was fantastic because he wanted to help me be included in woodwork. So he got together with occupational therapists to have them help me. So they worked out what it is that I will do in class and modify the equipment. (Sophia)

## Discussion

This research presents a multipronged set of experiences that suggest that successful educational experiences for students with CP occur through multiple collaborations and systems of support around the student. Success meant that students were happy to be at school, had friends at school, had parents who supported them, attended schools that both included and valued them as members of their school community.

The preparations and actions required to create a successful school experience for students with CP cannot be underestimated. Family, school staff and outside professionals all contribute to the student's participation. Foremost, family collaborations were important and an ongoing necessary school partnership as the student progressed through school. Many families were prepared to offer assistance to the school, although the assistance offered was time-consuming and required frequent interactions with school staff. Past research has acknowledged the role of parents as experts on their child with a disability and school participation issues [7,18]. Parents views on school placement and participation is variable. Some studies show a propensity for parents to prefer specialized classrooms for students with more complex needs and disabilities, while other parents support inclusion when their child will have access to appropriate supports [6,7]. The collaborative culture of the school may be influential in parents' decisions about mainstream or specialized schooling. Allied health practitioners can play a key role in mediating between families and schools and promoting school receptiveness to make responsive accommodations for students with CP.

Participants in this research concurred that achieving an inclusive school environment where students felt valued and involved

in classroom and school activities was reliant on a long standing, positive, proactive and solution focused attitude from all parties. Parents and teachers described the need for planning before school commenced for the students, and then throughout the school year. Teachers, principals and parents organized ways to achieve social inclusion for the student. Overall, students wanted to be at school, felt liked and welcomed, and included within the classroom and school community. Previous research with students with physical disability reported that appropriate adjustments that enabled student involvement occurred when teacher attitude was receptive to need [21]. Other studies of student experiences of inclusive practices at school have demonstrated the difficulties associated with a lack of social involvement in the school, with peers and teachers alike [22,23]. Parents in the present study described being a valued and contributing member to the team of support around their child. Teachers worked to assist the child's involvement in class and facilitated classroom cohesion. Allied health practitioners worked to assist students to participate in activities in class alongside classmates. Resources were needed to enact recommendations and schools were open to suggestions. Past research with parents has identified a lack of school resources as a barrier to their child's participation in the school setting and therefore a barrier to inclusion [15,22,8]. There has been little research to date that identifies allied health practitioners as key contributors to the success and participation of students with CP. The results of this study demonstrate that allied health practitioners can promote successful inclusive school experiences for such students, including being an advocate, providing education to school staff, directors, parents, the students themselves.

In this research, the inclusive culture of school and leadership were dominating influences in positive school experiences. Principals were charged with the responsibility of setting the inclusive culture of the school. This responsibility was taken seriously and strong leadership promoted the collaboration with outside organizations which were then able and welcomed to provide support to the school and student. Such organizations included those with allied health practitioners – physiotherapists, occupational and speech pathologists, as well as other medical and nursing expertise as required. Inclusive schools in this study recognized and sought the expertise of others and built their schools capacity to provide a supportive environment for all students.

Schools with a strong leadership also had a downstream culture of inclusion and value for all, and this translated into classrooms where teachers described being supported in their accommodations and actions to assist students. Teachers had access to outside school educational opportunities that were directly relevant to school accommodations for the student with CP. Opportunities to work with and learn from allied health practitioners who knew the student with CP or who were knowledgeable about CP was useful and valued by teachers. In this study, inclusive schools were characterized by being receptive to and collaborative with both families and external experts/supports; prepared to provide support and training to staff; transparent about what support was possible; and encouraging of all students in the school to value diversity. Past research aimed at improving post school options for adolescents with CP has emphasized the need for education and allied health practitioners to work together [3].

## Limitations

There are several limitations in this research. Experiences of all people were captured in one geographical location (Melbourne,

Australia) and recruited through one center and associated schools. Future studies might occur with different facilities, in diverse geographical locations to determine what common experiences exist. Qualitative research is not able to be generalized. Presenting the lived experience of multiple groups of people who share a common experience provides insight into how people experienced the phenomena under study. Future studies should build a broader sense of the depth and breadth of experience for other people, elsewhere.

## Conclusions

Education, making friends and experiencing a school community prepares a young person for post school options, employment and life in general. School success prepares a young person with a disability for a better life and may be key in achieving better health outcomes, as well as fair and equitable social and economic participation. Schools may be viewed as microcosms of the society in which they are located. If schools are able to find ways to accommodate, embrace and celebrate students with disabilities, then the communities in which those same students live may implement strategies to do the same.

A good education matters. Through their experiences at school, children and young people learn about themselves and the world in which they live ... All children and young people, no matter what their ability, have a right to education. They have a right to a school system that meets their educational needs. (p. 8-11) [16]

## Acknowledgements

Authors thank financial support from the William Buckland Trust Fund and to occupational therapists Madelaine Hand, Rebecca Stephan, Amy Weston and Sarah Gregorczen for assistance at stages of the conduction of this research.

## Disclosure statement

No potential conflict of interest was reported by the authors.

## Funding

This work was supported by The William Buckland Foundation (CT 13843).

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