Journal of Education, Teaching and Social Studies
ISSN 2642-2336 (Print) ISSN 2642-2328 (Online)
Vol. 5, No. 3, 2023
www.scholink.org/ojs/index.php/jetss

Original Paper

Aiming for Success through a Qualitative Examination of Educator Perceptions of Flexible Learning Spaces

Penny Round[1*] & Pearl Subban[1]

[1] Monash University, Victoria, Australia

[*] Penny Round, E-mail: penny.round@monash.edu

Received: July 24, 2023 Accepted: August 7, 2023 Online Published: August 11, 2023

doi:10.22158/jetss.v5n3p145 URL: http://dx.doi.org/10.22158/jetss.v5n3p145

Abstract

Flexible learning spaces are common in schools in Victoria, Australia, as is the practice of inclusive education. More research is required into teachers' perceptions about these flexible learning spaces and effective pedagogical approaches to supporting all students in these classrooms. Teacher education institutions also need to ensure pre-service teachers are prepared to teach in these spaces. A qualitative design was used, and interviews were conducted with seven educators to gain insights into their experiences and thoughts on teaching in the flexible learning space. Three main themes emerged: collaboration and relationships, the pedagogical implications and the actual physical space. The findings of this study will be useful for both teacher educators and educational planners, as we move into the next decade of learning and teaching.

Keywords

flexible learning space, pedagogy, inclusion, diverse needs

1. Introduction

While the concept of the open plan classroom became popular in the 1970s, more recently, there is a trend toward the flexible learning space in a move to accommodate the twenty-first century learner (Hickey & Forbes, 2011; Saltmarsh et al., 2015). As the flexible learning model gains ground, more research is required, especially with regard to the complexities of teaching in these spaces and effective pedagogical approaches for supporting all students. It is difficult to definitively describe the flexible learning space, as it is an individual teacher's design decision. How that designed space is utilised and furnished is up to the teachers and the school. From the participants in this study, the space typically involved two teachers working in one larger space with two classes or four teachers working in one larger space with four classes. Some were the same year level, but sometimes they were multi-year

level combinations. At the secondary school level, some students were undertaking the same subject, such as mathematics or English, but some were undertaking different subjects. Typically, there were spaces uninhibited by walls between cohorts, but some teachers had used furniture to create spaces or definition between student groups and even for noise reduction purposes. Tables were arranged differently by different teachers. Some were in clusters with small groups of students working together. Others had individual spaces for students who wanted the quiet independent work or needed break-out spaces for those students with sensory sensitivities and some had tried to arrange the room in a more traditional format using furniture or shelving as a wall, which actually "unflexes" the space.

The flexible learning classroom is an evolving space, designed to permit multifunctional uses of the space, flexibility with pedagogical approaches and to allow students to exercise more control over their own learning (Alterator & Deed, 2013; Leiringer & Cardellino, 2011). Teachers are more visible to one another, and these spaces can lead to improvement in pedagogical approaches, as teachers are able to work collaboratively; for example, one of the participants was a new graduate and was able to work with a more experienced teacher. The effective use of these spaces can also lead to increased student performance in academic terms (Byers et al., 2018). Through observation and modelling teachers can learn different approaches to teaching content or to behavior management. The space also enables students to develop the need for self-reliance and self-regulatory behaviors because as the walls between classes are removed the teacher loses some of their control (Charteris et al., 2017). On the other hand, the flexible learning space may challenge some teachers' practice. The teacher and educational authorities need to utilize these spaces effectively to achieve the best outcomes (Byers et al., 2018; Leiringer & Cardellino, 2011; Saltmarsh et al., 2015).

Teachers need to identify pedagogical approaches for using the space effectively, as this is the key to the most practical use of the classroom space (Benade, 2019). Teachers may need to be cognizant that relying on pedagogical approaches that have been used in more traditional spaces may need to be modified to ensure they are maximizing the potential of the flexible space, and the altered learning conditions. If the teacher is not prepared to teach in the flexible learning space and returns to traditional approaches then the classroom may become a place of conflict between teachers due to resistance to change and failure to adopt appropriate pedagogical practices that foster collaboration between colleagues (Alterator & Deed, 2013).

Additionally, the space may generate some challenges for students with diverse needs, with possible high noise levels and distractions (Saltmarsh et al., 2015). While existing research on flexible learning spaces focuses on the impacts on students' academic performance, there needs to be the corresponding discussion of how students with diverse learning needs respond when in flexible learning spaces and teachers beliefs about whether the needs of all students are being met within these spaces. Since the *Salamanca Statement and Framework for Action* (United Nations Educational, Scientific, and Cultural Organisation (UNESCO) (1994), inclusion has been an international commitment with the aim of improving education for all students (Ainscow, 2020), yet, the built environment continues to add

layers of complexity to the inclusion of people with disability in all aspects of society and leads to marginalization (Daniels-Mayes & Howe, 2021). Inclusion is the practice in Australian schools, so an additional layer to this research is how teachers believe flexible learning spaces are impacting students with diverse learning needs.

Typically, teachers want to make sense of, and impose order upon, new learning environments (Charteris et al., 2017). Architects usually design the flexible learning spaces but the field of architecture may be more advanced than those in the education sector. There is a crucial need for the two sectors of architecture and education to work together to effectively plan these spaces (Charteris et al., 2017). A recent study of 8000 peer-reviewed research articles revolving around the interconnection "between physical spaces, educational practices and learning" (Deppeler & Aikens, 2020, p. 4) revealed that school leaders were neglected in the design process, and added to this, inadequate educational opportunities were provided to equip teachers to effectively utilize these contemporary spaces in schools. Teachers want to know what works and how this translates to teaching practice and research-based effective approaches and professional development (Alterator & Deed, 2013).

In Australia, some of these flexible learning spaces have been retro-fitted into existing spaces and some are purpose built. The benefits for teachers working in these spaces are the possibility of team-work and collaboration, and the "sharing of resources and responsibilities" (Saltmarsh et al., p. 316). The benefits to students are that it may be a different environmental experience for them, which encourages "self-directed learning, freedom of movement and peer collaboration" (Saltmarsh et al., 2015, p. 316) which may prepare them for what their future work environment may be like. With the flexible learning space and the increase in student numbers, students have the opportunity to work independently or in groups, relying less on the teacher for information input, which aligns more with the initiative and self-regulatory behaviors that employers might look for in an employee. Ultimately it is how teachers use these spaces that is important. The need for organization, planning and monitoring determines the pedagogical benefits for students (Saltmarsh et al., 2015).

1.1 The Context of This Study

There is a need to understand teachers' perceptions of these flexible learning spaces and the impact on all students. Flexible learning spaces are commonplace in schools in Victoria, Australia. The current project intends to add the teachers' voice to current knowledge and present their experiences of effective pedagogical approaches that are used to support all students. An exploration of teachers' perceptions of flexible learning spaces will inform practice, policy, and preparation contributing to teacher education institutions, educational administration, and ultimately exemplary practice.

1.2 Theoretical Foundation

Driven by the work of Russian psychologist Lev Vygotsky (1978), this review broadly frames flexible learning with Social Development Theory (SDT). In this context, social interaction, collaboration and communication becomes central to the learning and teaching process. Learners interact with each other, as opportunities present themselves, co-constructing knowledge in order to advance their own and the

learning of their peers. As a result, the learning environment becomes integral to the development of children and how they construct ideas. Adults, or the "More Knowledgeable Other" (MKO), become sources of information, skill and knowledge, upon which the child relies to progress their learning. Also, more experienced teachers can act as the MKO for less experienced teachers (Drew et al., 2018).

Involvement in learning is assumed to be a natural process, according to SDT, with children seeking out opportunities to advance and progress their skill (Mcleod, 2018). These opportunities are presented through learning occasions and modelling through collaborative dialogue. The learner engages with those around them, then the process is internalized in order to reinforce learning. Therefore, guidance by another, through deliberate and incidental means, becomes elemental to the learning process. This then leads to a principal underpinning of the learning process, according to SDT, that of the MKO, in reference to an individual with higher understanding, skill and knowledge. These are individuals/concepts within the child's (or teacher's) context who have progressed further along the continuum, and may include adults, peers and even electronic media in the contemporary context. Additionally, SDT rests on the concept of the Zone of Proximal Development (ZPD), referring to that which the learner acquires independently, and what can be achieved with guidance (Mcleod, 2018). The ZPD becomes a space for sensitive and thoughtful leading, guiding the learner to skills and knowledge, which they will confidently acquire and utilize on their own.

2. Method

In order to facilitate this study, a qualitative design was used, including in-depth semi-structured interviews, to examine teachers' perceptions of flexible learning spaces and their perceptions of the impact of flexible learning spaces on students. This approach allowed for the voice of the teacher to come through, and via the interview process the educators' experiences and opinions were able to be drawn out and interpreted.

Consequently, the following research questions were used to drive the project:

What are teachers' perceptions of flexible learning spaces?

What do teachers believe are the impacts of flexible learning on their support of students with additional needs?

What are some of the practises that teachers consider to be effective in their support of all students within flexible learning classrooms?

Semi-structured interviews were conducted with seven educators working at varying locations around Victoria, Australia, incorporating some rural and some suburban and with different levels of teaching experience. The semi structured interviews allowed for the collection of in-depth data while also enabling participants to delve into details they considered relevant to the discussion; flexibility and detailed conversations were able to occur with the research questions also being at the fore (Carrington & Graham, 2001).

In an attempt to keep the interviews conversational, an interview guide (Patton, 1990) was used to ensure that those interviewed felt comfortable and that the purpose of the interview was not to critique their teaching or their school but rather as a means to gather information on their experiences and also on their effective approaches to supporting students in the flexible learning classroom.

2.1 Participants

Of the seven participants interviewed, one was a school principal of a large public suburban secondary school (who was a primary trained teacher) and six were classroom teachers with a range of years of teaching experience. One was a new graduate, with less than a year's experience in a classroom. She was in a large public primary school; two had four years of teaching experience - one had a Master's degree and was teaching in a small public secondary school - the other worked in a small public primary school and two were experienced teachers; one of these was a male year-level coordinator teaching students in the flexible learning class space who were in the year level of his coordination. This was a very large public rural secondary school, with an enrolment of more that 1200 students. The other was a female teaching in an average-sized public rural secondary school. One had taught in two schools that used flexible learning spaces – one school where the space was retro-fitted and one school which had purpose built flexible learning spaces. The interviews loosely focused on five main topics: (1) benefits of working in a flexible learning space; (2) challenges of working in a flexible learning space; (3) effective pedagogical approaches to use when working in a flexible learning space; (4) how the flexible learning classroom impacts on students with diverse needs; and, (5) administrative support for the use of the flexible learning space. Approval was granted for the research through the university's ethical review board and also through the relevant Department of Education and Training ethical review board.

2.2 Interviews

Interviews were conducted over the phone with four of the participants at a time of their choosing; all of whom were classroom teachers. The interview with the school principal was conducted face-to-face at the participant's school at a time of her choosing, as were the interviews with two of the teachers. Six of the interviews were conducted by the first-author who began by asking about the participants' experience teaching in flexible learning spaces. The seventh interview was conducted by the second-author. The interviews proceeded conversationally but pre-determined questions were asked if the participant did not incidentally respond to these.

2.3 Data Analysis

The interviews were recorded and then transcribed by a professional transcription service. The first author read through the interview transcripts for initial sorting into separate units (meaningful comments) for further analysis; these units contained a sentence or paragraph that had one relevant point. These were then further explored by asking the question: 'What is this piece of data an example of?' (Punch, 2005, p. 209). This was interpreted by the researcher as referring specifically to what is this comment an example of in terms of a benefit, challenge, effective approach or administrative approach in terms of teaching in

a flexible learning space. This approach to data is non-linear and the coding of the comments was fluid as the analysis progressed. This was then examined with the second researcher to reinforce the themes that were emerging.

The interview responses were analysed using Braun and Clarke's (2006) thematic analysis coding process. The interview transcripts were analysed and information emerging across interviews were organized into five codes. These were then combined into three themes.

Participants were all provided the opportunity to review the transcript of their interview to ensure trustworthiness of data (Burnard et al., 2008).

Initially five categories emerged: administrative support, tertiary institutions, pedagogy for supporting all students, the space, and students with additional needs. As coding progressed these were reorganised, altered, deleted and adjusted into three themes of: collaboration and relationships; pedagogical implications; and, the physical space implications.

3. Findings

Interview analysis across cases provided insight into the three specific themes that were consistently mentioned as related to flexible learning spaces. These three themes are represented in Figure 1.

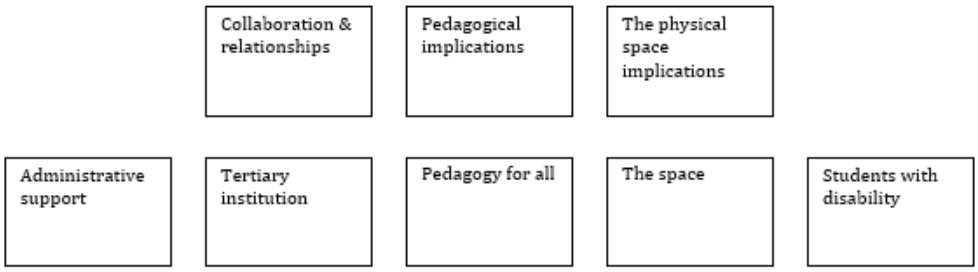

Figure 1. Relevant Factors in the Success of Effectively Using a Flexible Learning Space

Theme 1: Collaboration and relationships

Of importance to the teachers interviewed was that the school administration considered the rationale behind the school moving towards flexible classrooms and importantly, the level of support required from the administrative team for the teachers who work in this space. Teachers wanted professional development in effective pedagogical approaches specific to teaching in these flexible spaces and all respondents stated that no professional development opportunities were available. This meant that they needed support from the administration for scheduled time so those teaching together could meet regularly. This was their form of professional learning, as they were able to discuss, collaborate and problem solve. One teacher pointed out that *we meet a lot in our own time.* In this regard, another respondent suggested that *a time allowance would be ideal,* indicating that teachers were asked to work collaboratively, but crowded timetables did not offer time allocations for collaborative work. As a consequence, planning was often done incidentally:

We shared the same office together…so each time after class or even 10 minutes at recess, we could just reflect on what happened and then we'd kind of change our plan.

Some innovative school leaders appear to have worked around the time complexity by reducing the administrative workloads of some staff:

the (principal) took a lot of that (administrative tasks) off us and gave it to the office staff.

No teacher had specific preparatory education in their pre-service teacher education institution, with one stating clearly that *open plan learning was not ever mentioned in my pre-service training* and this then adds to the need for professional development. It also heralds the need for teacher education programs to incorporate this teaching and learning model into its preparatory units.

Additionally, there was a need for the teachers involved to be selected carefully, and for the school staff to work, as one teacher responded, *"proactively to pick the staff"*. It was also pointed out that teachers need to be good communicators, have a strong physical presence in the classroom and know how to effectively use their voice. All teachers interviewed felt the benefits of flexible learning were being able to work with colleagues, particularly if the staff had been able to have a voice in those who would teach together. The new graduate interviewed felt she benefitted from working with an experienced teacher and noted that *I think as a graduate you should be put in a team-teaching situation…you're not isolated*. This reveals the importance of the collaboration between staff within the flexible learning spaces and how this should be beneficial to new staff as the "team teaching" would act as a form of incidental mentoring positioned within Vygotsky's MKO (1978).

The interviews also revealed that teachers needed to be aware of the increased student numbers, so becoming aware of individual student needs could be a challenge. It was important for teachers to build relationships with all students. The teachers felt that those students who had behaviors of concern were further compromised by the flexible space. It was thought that children who experience levels of anxiety could be overwhelmed in the space.

…probably the largest downside…a number of kids who really struggle with various forms of anxiety, really struggle with building relationships with other kids…it can be quite overwhelming.

Theme 2: Pedagogical implications

Three of the teachers interviewed noted the success of the Gradual Release of Responsibility model (Pearson & Gallagher, 1983) and its effectiveness in the flexible space. They acknowledged that the space was more successful if the students were at the same year level and studying the one subject. Teachers felt they were able to work together and able to differentiate better and *share resources* and *do a majority of our planning together*; with group work being more effective in the flexible classroom. One teacher discussed the importance of pre-teaching expectations of students in the space; how the space would be used by the teachers and the students, and expectations for working and behavior. There was a need to:

…set up expectations…the kids would have to know exactly what they're doing, set up routine (proactively with students about the structure and use of the space).

It was explicitly discussed with students that they would generally work together as a group for initial instructions and then break away into smaller groups.

All teachers felt that they worked well with colleagues to share resources, planning, to collaborate, for modelling for students and co-teachers, to make teaching more visible, transparent and accountable. For the principal, this was one of her goals when introducing flexible spaces.

Break-out spaces were an important layer to the pedagogical approach. The teacher needed to *create smaller spaces within the bigger space* and ensure that the teachers were highly aware of talking to all students, not just those in "their class" and letting the students know that they could talk to all teachers in the space, and teachers also needed to be proactive about approaching students and checking in with them. One teacher had:

> *conferencing sheets…with your students' names on it to make sure you've checked in with every kid…just making sure you've caught everyone*.

Another noted that:

> *It was actually a lot about communicating with them (the students who struggle in the space) and saying, "When you're upset or when you're feeling overwhelmed…what do you need?"*

Teachers felt the space was great for effective differentiation and for students who wanted more of an academic challenge because they were able to be grouped together and work on extension activities.

> *…the kids who are of higher ability, they obviously bounce off each other…and they can honestly just be task orientated…*

One teacher noted that the teachers in the flexible space:

> *introduced pre-tests and post-tests…and set up groupings…you can really have that more explicit instruction for them.*

Theme 3: The physical space implications

The final collapsed theme relates to the physical implications of the space and reflected interesting perceptions by teachers. Many acknowledged that how the space was used and the space itself was important. When the space was retro-fitted, it was less than ideal, as often there were poor acoustics, lighting, heating and no break-out spaces. When the spaces were purpose built there was a stronger sense of the success for the students.

> *…actual buildings that have been built for open plan, they have breakout rooms and sound proof rooms*

One teacher who worked in a school where she had been in a retro-fitted open-plan space and then after a large refurbishment moved in to the purpose-built space, felt it was much more successful, but felt that the *architects need to work with teachers* as there were elements that were quite illogical; aesthetically appealing but not functional.

Appropriate furnishings were required, as these could be used to create break-out spaces, barriers and also as storage. Acoustics was a strong issue that emerged, as the noise with so many people in the one space could be overwhelming, for many students and teachers, let alone students with sensory

challenges.

Physically having more space to teach smaller groups appeared to bring the best of both worlds:

> *In our larger space, we can easily take the kids that are moving really fast and challenge them into the next levels. And have another group that's working with a little bit of support from a teacher guiding them and then have two further groups that are having some quite explicit teaching going on, and they're all within the one space. Some of the things we find with those kids is that they don't respond as well with open plan.*

However, staff pointed out that the larger spaces posed risks and challenges for students with additional learning needs:

> *The minute you put those kids … with behavioral difficulties… in to a larger space, they really struggle. They kind of respond better to a confined area. But our open plan space has the ability to open and close off classroom spaces on the side.*

Corroborating this view, another respondent revealed that without appropriate monitoring, some student needs could be overlooked. As a consequence, the flexible settings posed a challenge:

> *It's really easy for kids to slip through the cracks if they're not being watched closely. The environment is such that the kids can find nooks and crannies.*

In relation to students with additional needs, the teachers had mixed responses. Some felt they could utilize the teacher aides more purposefully and could more effectively organize targeted intervention programs, but there was a need to work more closely and collaboratively with the aide in the planning process. Others felt that there were too many students in the one space and too much change and movement that could be overwhelming for some students. The acoustics was a common issue, especially when there was a child in the class with a hearing loss. There was a frequent comment about the benefit of having, or the need to have, break-out spaces where individuals could "escape" reactively or proactively or to be used for specific interventions.

> *For students with disabilities it really works for them…our aiding means that we can …spread across more kids…we effectively treat the aide almost like another teacher…best use of that resource…at the moment we don't plan enough with them…we know that we need to work on (this) better.*

It was evident that accommodating students with additional needs was a challenge:

> *…we've had kids with hearing disabilities…so if they've got their hearing aides in…I've had kids cry over it (the noise) …when it gets too loud.*

Others were quite direct in referring to the incongruence between the flexible learning spaces and accommodating students with additional learning needs:

> *When I'm looking at kids with additional needs I don't think it works...it's too much change… there's a lot of moving around.*

One respondent reflected that the flexible spaces offered opportunities for innovative programming, which catered for multiple student needs:

> *The one thing that you can do really well with an open plan, is you can organize a lot of intervention programs or extension programs by having a range of teachers, so you don't stream them but you can really tailor their needs.*

Another teacher noted that increased student numbers meant that some students did not receive the due attention they deserved, reflecting that some "just get away" due to the numbers in the room.

> *Lower kids can drop underneath the radar because they can act like they're working because there's 65 kids in the room, they can just get away with it a little bit…*

4. Discussion

The aim of this study was to explore teacher perceptions of flexible learning spaces and effective pedagogical approaches to supporting all students within that space. The study makes a novel contribution to the literature, highlighting the voices of teachers working in flexible learning spaces, the pedagogical implications and teachers' perspectives of how these spaces impact students with diverse learning needs in an inclusive education system. Results of thematic analysis revealed three themes related to collaboration and relationships, pedagogical implications and the implications of the physical space.

The findings reveal that teachers have mixed responses to the efficacy of teaching in these spaces, often based on whether the space was purpose built or retro-fitted and with whom they were co-teaching and the support from the administration of the school. A common thread was the need for a range of specific pedagogical approaches to maximize teaching and learning for all students. The teachers all felt that there was a lack of professional learning opportunities available (nor was teaching in flexible learning spaces a part of content covered in initial teacher education programs) and the teachers needed to rely on each other to develop their content and pedagogical approaches, teachers are learning by doing. Teacher education institutions also need to take on the role of the MKO and ensure their programs are preparing pre-service teachers to effectively utilize these spaces.

Teachers generally felt that when teachers were carefully selected and wanted to work in the space with colleagues, it was successful. They had more interactions with more students, teacher aides were better utilized, it was good for discussion with the whole group of students – it was helpful when teaching students with behaviors of concern as there were more teachers, more support, and different approaches, it was less isolating for teachers who were able to share resources, collaborate with colleagues or tap into Vygotsky's MKO (Drew et al., 2018) across a range of subject areas, that the "classroom territories are rich with collaborative potential…The physicality of individual territory ownership is reframed through the assemblage of resources, bodies and spatial demands" (Charteris, et al., 2017, p. 818). Also, in a classroom there is a wide range of student abilities and teachers can work with students in "different spaces" to provide targeted additional support and it was beneficial for highly able students.

The challenges that the teachers commonly identified were related to a space that was not purpose built, therefore not acoustically appropriate; it was wearing on the voice of the teacher and draining but also

overwhelming for students with hearing loss or anxiety. Children, particularly younger children, are more aware of background noise and can be easily distracted; all children need a classroom with clear acoustics and there are students at an increased risk, such as children with hearing loss, a middle ear infection and an English as an Additional Language background (Nelson & Soli, 2000), which impacts the inclusivity of the flexible learning space. Most teachers interviewed felt that there were too many people for students with diverse needs and students can too easily opt out, "disappear". Also, the process of groupwork had both benefits and disadvantages. The benefit was that the more capable students could be grouped together and access an accelerated curriculum, which is important for highly able students to ensure they are challenged (Kronborg, 2018) and they have access to enrichment activities and withdrawal classes (Gagne, 2011, 2015), but it was difficult to form groups that cater both socially and academically for all students. Vygotsky's SDT (1934) highlighted how important social interaction, collaboration and communication was to the learning and teaching process (Drew et al., 2018). Learners need to interact with each other collaboratively to advance their own learning and that of their peers and the learning environment is crucial to this process. Adults, peers or colleagues - the "More Knowledgeable Other" (MKO) - are an important source of knowledge (Drew et al., 2018).

Administrative support also played a role in whether the teachers felt the space was effectively used. Teachers wanted input into whom they would co-teach with, time allocation built into their teaching load or a scheduled meeting time, was either appreciated or yearned for. The principal and teachers noted that resourcing is needed so that teachers can furnish the classroom appropriately which can help to delineate space; display boards, to ensure they can plan activities appropriate to the space, allowing students to be able to discriminate the activity by the set up and consider the needs of the children when moving within the space and the individual needs of children, especially when considering the needs of students with additional learning needs (Saltmarsh et al., 2015). These smaller spaces are important in these large flexible spaces as they act as cues as to how the resources in each area are to be used and the expectations. There are pedagogical implications. While the spaces need to be flexible, even experimental, there is a strong need for organization and consistency. A teacher who managed successfully noted that the team needed routine, organization, clear allocation of responsibilities, lesson planning and delivery, and classroom management. For a number of teachers, structuring the day was important in the process of ensuring "orderly progression through extensively planned and often highly choreographed activities" (Saltmarsh et al., 2015, p. 324). Charteris' (2017) research posits that for teachers, flexible spaces "require significant shifts in how they relate to students, colleagues and to their work" (p. 817). Teachers worked together to understand the individual needs of their students and devised approaches to support them by individualizing lesson planning, yet this can be a challenge due to the large student numbers within the room and the need for flexibility for individuals. There was the need for professional learning in the area of pedagogical approaches relevant specifically to flexible learning spaces and the expectation needed to be within the teachers' ZPD. There is a need for the teachers and the students to both learn how to most effectively utilize the space. Flexible spaces require

teachers to "de-privatise" their authority over "their" class and "their" space (Charteris, 2017).

Implications

With flexible learning spaces becoming increasingly popular within contemporary schools, this study sought to determine some of the views of educators working within this context. With a view to enhancing this space, the following notions have been isolated as implications.

4.1 Collaboration

Flexible learning requires two levels of collaboration. At the outset, school administrators should ideally consult with staff earmarked to teach within these settings. Consulting with the chosen personnel offers them greater agency. Teachers often feel alienated from collective decision making (Thomson & Riddle, 2019), so including their views with regard to flexible learning is likely to have positive implications. The second level of collaboration should feature between the staff who occupy the flexible classroom. Establishing respectful and cooperative partnerships is integral to co-teaching, involving high levels of communication (Russell, 2019). This form of communication ensures consistency and stability within the flexible classroom, creating a conducive working and learning space.

4.2 Additions to Teacher Education Programs

With flexible learning becoming a popular choice, teacher education programs should consider incorporating elements of this innovative approach into their programs. A paper from the Australian Council for Educational Research (ACER) (2015) alluded to the benefits of an integrated program of study for initial teacher education, which incorporated the practices of schools. Partnerships between schools and universities are viewed as crucial to the success of teacher education programs (ACER, 2015).

4.3 Time

Flexible learning often requires greater planning time, between those individuals who co-teach in the space. This may involve the teaching staff and the support staff who assist the programs of students with additional learning needs. Research into the provision of more time for planning suggests that a reduction of administrative tasks, and increased time afforded to planning, produces better outcomes in the classroom (Anderson, 2019). With the dynamic of flexible classrooms resting heavily on teacher collaboration, planning time is essential to select strategies, reflect on and develop appropriate lessons, and prepare effective resources for use in the setting (Merritt, 2016).

4.4 Professional Development

Like any innovation or reform, the introduction and sustenance of the flexible setting requires professional development. Research in the field acknowledges the significant and sustained positive effects of professional development (Gore et al., 2017), with the quality of teaching being an influential factor within this context (Hattie, 2008). It follows therefore that school administrators should ensure consistent professional development aligns with innovation and change, to facilitate teaching quality and positive perceptions among teachers. Developing and supporting the work of teachers within flexible settings becomes integral to the success of programs in these spaces.

4.5 Accommodating Students with Additional Learning Needs

Within flexible settings, students with additional learning needs may struggle to cope and keep up with the demands of learning. Flexible settings often house many students, with noise levels in these larger spaces distracting and interrupting the teaching and learning process (Mealings et al., 2015). As a consequence, students with additional learning needs, including students with disabilities, may be challenged by the additional points of distraction. Teachers in the setting acknowledge that the flexible setting is usually not ideal for students with disabilities, and for students from language backgrounds other than English (Mealings et al., 2015). Accommodating students with disabilities in smaller, enclosed spaces for individualised support, may be more appropriate for learning. These spaces could be breakout rooms attached to the main flexible space (Mealings et al., 2015). Additionally, the use of a range of teaching methods, and authentic differentiated instruction, especially to accommodate students with additional needs, would be prudent, especially for the long term.

5. Conclusion

The aim of this study was to explore teacher perceptions of flexible learning spaces and effective pedagogical approaches to supporting all students within that space. Mixed responses from teachers reveal the need for greater research into this approach at the grassroots level by highlighting the voice of those working in the flexible learning space, and the impact that it has on teaching and learning at large for all students. The study acknowledges that flexible learning is an innovative approach, and a productive movement away from the rigidity of a more didactic, traditional approach. The emergence of flexible classrooms certainly adopted a more constructivist approach, accommodating the socio-cultural needs of the contemporary learner. The method further acknowledges the shifting role of the teacher from the “sage on the stage” to the facilitator, working within teams, in an attempt to meet student needs.

This study is cognizant of the dynamic spaces created by flexible classrooms, viewing these as areas for collaboration, team-teaching and a space to share skills and ideas in groups. In order to best support the needs of this unique space, teacher education programs should build in units of study to coach pre-service teachers who may be part of teams within flexible settings. Additionally, with flexible settings gaining ground, it would be wise for school administrators to build in essential planning time for teams who work in the flexible classroom. This is likely to create more cohesive and effective learning and teaching programs, benefiting both the teacher and the student. Aligned with this, the need for professional development for staff becomes paramount. Quality teaching correlates directly to effective learning, therefore teachers should be regularly developed in order to fuel excellent learning programs. Within flexible settings, for a school to be truly inclusive, students with additional learning needs may require more individualized attention, to ensure that their profiles are effectively catered for. The need for break out rooms need to be a factor, so students can have a quieter space to work. Acoustics must also be considered. Here too, more intentional planning may contribute to enhanced

student outcomes, while meeting essential social and emotional needs. Utilizing a range of teaching strategies and authentic differentiation may contribute to an efficient learning program for students with additional learning needs.

Future research in this space could focus on the perceptions of students, para-professional staff and parents, as well as a closer examination of more physical features such as acoustics and seating plans.

References

Ainscow, M. (2020). Promoting inclusion and equity in education. Lessons from international experiences. *Nordic Journal of Studies in Educational Policy*, *6*, 7-16. https://doi.org/10.1080/20020317.2020.1729587

Alterator, S., & Deed, C. (2013). Teacher adaptation to open learning spaces. *Issues in Educational Research*, *23*(3), 315-330.

Anderson, J. (2019). The gift of teacher time: Making teachers' time a valued resource in your school. *Usable knowledge (Harvard Graduate School of Education)*. https://www.gse.harvard.edu/news/uk/19/09/gift-teacher-time

Australian Council for Educational Research (ACER). (2015). *Teacher education – from best practice to common practice*. https://www.acer.org/au/discover/article/teacher-education-from-best-practice-to-common-practice

Benade, L. (2019). Flexible learning spaces: inclusive by design? *New Zealand Journal of Educational Studies*, *54*, 53-68. https://doi.org/10.1007/s40841-019-00127-2

Braun, V., & Clarke, V. (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*, 77-101. https://doi.org/10.1191/1478088706qp063oa

Burnard, P., Gill, P., Stewart, K., Treasure, E., & Chadwick, B. (2008). Analysing and presenting qualitative data. *British Dental Journal*, *204*, 429-432. https://doi.org/10.1038/sj.bdj.2008.292

Byers, T., Mahat, M., Liu, K., Knock, A., & Imms, W. (2018). A systematic review of the effects of learning environments on student learning outcomes. Technical Report 4/2018. *Australian Government. Australian Research Council*. The University of Melbourne.

Carrington, S., & Graham, L. (2001). Asperger's syndrome: Learner characteristics and teaching strategies. *Special Education Perspectives*, *8*(2), 15-23.

Charteris, J., Smardon, D., & Nelson, E. (2017). Innovative learning environments and new materialism: A conjunctural analysis of pedagogical *spaces*, *Educational Philosophy and Theory*, *49*(8), 808-821. https://doi.org/10.1080/00131857.2017.1298035

Cook, H. (2015, 23 November). Schools hit a wall with open-plan classrooms. *The Age*. http://www.theage.com.au/victoria/schools-hit-a-wall-with-openplan-classrooms-20151123-gl5vo8.html

Creative Research Systems (Producer). (2012). *Sample size calculator*. http://www.surveysystem.com/sscalc.htm#one

Daniels-Mayes, S. & Howe, I. (2021). The need for inclusive design: going beyond the minimum standards in the built environment. *Academic Letters*, *474*.

Deppeler, J., & Aikens, K. (2020). *Responsible innovation: Designing schools for tomorrow's learners*. Monash University. http://www.educationfutures.monash.edu

Drew, P., Allman, B., Casto, A., & Norwood, J. (2018). *Sociocultural perspectives of learning*. https://lidtfoundations.pressbooks.com/chapter/sociocultural-learning/

Gagne, F. (2011). Academic talent development and the equity issue in gifted education. *Talent Development & Excellence*, *3*, 3-22.

Gore, J., Lloyd, A., Smith, M., Bowe, J., Ellis, H., & Lubans, D. (2017). Effects of professional development on the quality of teaching: Results from a randomised controlled trial of Quality Teaching Rounds. *Teaching and Teacher Education*, *68*, 99-113. https://doi.org/10.1016/j.tate.2017.08.007

Hattie, J. (2008). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Taylor & Francis, Hoboken, NJ.

Hickey, C., & Forbes, D. (2011). Open spaces learning: meeting modern needs or repeating past mistakes? *Independent Education*, *41*(2), 10-13.

Kronborg, L. (2018). Cultivating teachers to work with gifted students. In J. L. Jolly, & J. M. Jarvis (Eds.), *Exploring Gifted Education: Australian and New Zealand Perspectives* (pp. 83-94). Routledge. https://doi.org/10.4324/9781351227704-7

Leiringer, R., & Cardellino, P. (2011). Schools for the twenty-first century: School design and Educational transformation. *British Educational Research Journal*, *37*(6), 915-934. https://doi.org/10.1080/01411926.2010.508512

Mcleod, S. (2018). Lev Vygotsky. *Simply Psychology*. https://www.simplypsychology.org/vygotsky.html

Mealings, K. T., Demuth, K., Buchholz, J. M., & Dillon, H. (2015). An assessment of open plan and enclosed classroom listening environments for young children: Part 2 – Teacher's questionnaires. *Journal of Educational, Pediatric & (Re)Habilitative Audiology*, *1*, 2015.

Merritt, E. G. (2016). Time for teacher learning, planning critical for school reform. *Phi Delta Kappan*, *98*(4), 31-36. https://doi.org/10.1177%1172F0031721716681774

Nelson, P. B., & Soli, S. (2000). Acoustical barriers to learning: Children at risk in every classroom. *Language, Speech, and Hearing Services in Schools*, *4*(31), 356-361. https://doi.org/10.1044/0161-1461.3104.356

Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Sage Publications, Inc.

Pearson, P. D., & Gallagher, M. C. (1983). The instruction of reading comprehension. *Contemporary Educational Psychology*, *8*(3), 317-344. https://doi.org/10.1016/0361-476X(83)90019-X

Punch, K. (2005). *Introduction to social research: Quantitative and qualitative approaches* (2nd ed.). London: SAGE Publications

Russell, D. (2019). Teaching methods: Co-teaching to improve student outcomes. *Teacher Magazine (ACER)*. https://www.teachermagazine.com.au/articles/teaching-methods-co-teaching-to-improve-student-outcomes

Saltmarsh, S., Chapman, A., Campbell, M., & Drew, C. (2015). Putting "structure within thespace": spatially un/responsive pedagogic practices in open-plan learning environments, *Educational Review*, *3*(67), 315-327. https://doi.org/10.1080/00131911.2014.924482

Shield, B. M., Greenland, E. E., Dockrell, J. E., & Rigby, K. (2008). Children's perceptions of speech and hearing in open plan and enclosed classrooms. In *Proceedings of the Institute of Acoustics* (Vol. 30, pp. 10-19).

Shield, B., Greenland, E., & Dockrell, J. (2010). Noise in open plan classrooms in primary schools: A review. *Noise & Health*, *12*(49), 225-234. https://doi.org/10.4103/1463-1741.70501

Thomson, P., & Riddle, S. (2019). Who speaks for teachers? Social media and teacher voice. In A. Baroutsis, S. Riddle, & P. Thomson (Eds.), *Education research and the media: challenges and possibilities* (pp. 119-134). Abingdon: Routledge. https://doi.org/10.4324/9781351129114-7

Vygotsky, L. (1934). *Thought and language*. London: MIT Press.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.

Woolner, P., Hall, E., Higgins, S., McCaughey, C., & Wall, K. (2007). A sound foundation? What we know about the impact of environments on learning and the implications for Building Schools for the Future. *Oxford Review of Education*, *33*(1), 47-70. https://doi.org/10.1080/03054980601094693

Yin, R. K. (2014). *Case study research design and methods* (5th ed.). Thousand Oaks: Sage.