

Gallwch ychwanegu'ch targedau o'ch aseiniad diwethaf (Ond yn berthnasol os yr ydych wedi cwblhau aseiniad) / Please add your targets from the previous assignment (Only relevant if you have completed an assignment)

	Targed/target	Yr hyn yr wyf wedi'i wneud yn yr aseiniad hwn What I have done in this assignment...
Targed/Target 1	To develop criticality interpreting ideas and theories, identifying links as well as criticisms.	Used the Harvard referencing guide provided by the university:
Targed/Target 2	To be less descriptive.	Used the Manchester Academic Phrase bank when appropriate.
Targed/Target 3		

**Investigating the impact of Classroom Furniture on Student Engagement and Wellbeing: An
Analysis of Tables and Chair's Influence on Learning**

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Aim, Focus and purpose of the research/research Context.

The aim of this essay is to understand the impact the classroom layout has on engagement and wellbeing; addressing the layout of the tables and chairs within a classroom, providing insights into how physical learning environments contribute to the learning experience. Specifically, how the layout impacts engagement, collaborative work and the effect on pupil wellbeing. In a previous paper, I have looked at the effective use of classroom displays arguing if they are an aid or a distraction, particularly focusing on a critical incident as described by Tripp (2012). My own pedagogy believes that everything in a learning environment plays an important role in the teaching and learning, and even has a holistic impact on the learner. Carol Weinstein (1981) states that although the environment does not teach, it does enable certain behaviour and hinders others. She also mentions that the seating arrangements can have a direct effect on the learning and the ability for learners to carry out a specific task.

Through multiple different school observations, a common theme was that all learners in progression step 3, sit in small groups of tables. The research will hope to understand the impact that this layout has, looking at different ways the layout can be changed in order to support the learner and the needs of the lesson. The 32 Strands for Professional standards for teaching and leadership (Welsh Government, 2019) support this research under the following strands: pedagogy, refining teaching, managing the learning environment and professional learning, wider research and findings. Through this research I hope to be able to manage the learning environment in order to not only suit the needs of all learners but also so that it will benefit the teaching in the class. By understanding the research and pedagogy behind this, it will allow me to make better decisions in my own professional teaching practice.

As following BERA's Ethical Guidelines for Educational Research (2018), the school throughout this paper will be referred to as School X. School X is a mainstream, double intake, newly developed school built in 2015, based in South Wales. The school currently has a population of 420 pupils, 17

teachers alongside the Headteacher and Deputy Headteacher/Alternative Learning Needs (ALN) coordinator. There are 11 LSOs at School X who are all based in Nursery - Year 2. (School X, 2024).

The research will take place in a Year 4, mixed gendered class. The class has 14 boys and 16 girls, with no ALN pupils in the class and one learner who has learnt English as a second language (ESL). There are currently five tables in the classroom, and they have been laid out so that learners sit in groups of six. They have been grouped with limited reference ability with only two tables being complete of the same ability grouping. This research will be used to help answer the research question “How does layout effect learning?”

Overview of relevant literature.

The classroom environment in the United Kingdom has changed rapidly in the last 200 years. (Schratzentaller, 2010). This is partially influenced by the Victorian school reform in 1856. Back when free-flowing classrooms with one teacher working on a focus group of pupils has now changed to one teacher in charge of what would be hundreds of pupils at once (Makitalo-Siegl, 2010). It wasn't until schools in Germany were observed as having singular structure learning spaces, where all desks were faced towards the front and learners placed via differentiation of learning ability, that we adopted this approach. The classroom in the beginning of the 19th Century looked similar to that of a theatre, yet learners were not grouped nor were they age-separated, that was until the 1950s. Learners sat at individual desks and a chalkboard at the front, with the teacher being the central figure in the learning process (Schratzentaller, 2010 and Makitalo-siegl, 2010).

Today this has evolved into what we now recognise as the primary school classroom. Groups of learners sit on shared tables to promote teamwork and communication among students (Rae and Sands, 2013). This was designed to foster a more engaging and inclusive learning experience, moving away from the teacher-centred model to one that promotes student interaction and active

participation in the learning process. In one study, seating groups of students together on one table found that engagement and distraction was high (Kariippanon, 2018) due to the focus on the collaboration and learners being more able to discuss their learning with peers as supported by the four purposes of the Curriculum for Wales; enterprising creative contributors in which they can work collaboratively (Welsh Government, 2015). Yet without the self-discipline to remain on the topic or question that has been posed, learners often found themselves drifting off topic discussing freely (Rae and Sands, 2013 and Kariippanon, 2018). This has also been observed at School X. An overall agreement from researchers however, is that students learn better when they can engage with each other as they learn new concepts (Young et al, 2017). A long-standing concept is that learners who sit in the back of the classroom do not perform as well as those in the front. Armstrong and Chang (2007) found that highly motivated learners self-select seats at the front of the class. By modern classes having learners sit in groups, this ensures that all learners are relatively close to the front without a single row being at a disadvantage via physical means. Despite being phased out of classrooms in Wales, rows of tables are still heavily prevalent in other countries from around the world. Particularly East Asia such as Singapore, China, and Korea, still have their classroom tables laid out in rows or individual desks, due to the focus of the learning being far more teacher led (Kim, 2018). Yet these countries had the highest results in PISA 2022 (OECD,2023). However it is found in these countries that pupil well-being is far less, due to the pressures of the education system (Yoon and Jarvinen, 2016).



Figure 1

Flexible Classroom in
progression step 2 at School X

In progression steps 1 and 2, this has seen the biggest changes in recent years with more schools adopting what is recognised as the flexible classroom. Different furniture situated in different parts of the classroom, in order to facilitate the learning for each individual area. This is where you see a big comparison in the classrooms of a primary school, as there is often not only the layout effected but the different types of furniture used such as bean bags, cushions and soft padded seating. It is now established that there are connections between physical well-being and learning (Awartani et al, 2008), with learners in a previous study suffering with symptoms such as headaches and back problems stemming from the classroom environment.

Wingrat and Exner (2005) suggest that increasing student comfort through soft furniture can reduce behaviours such as rocking, fidgeting and position changes - all expected behaviour when learners are required to sit for extended periods of time. These soft furnishings are more present in younger years classrooms as appose to older learners even into secondary schools, whose learning is overall more focused where the need for comfort would be greater, it would seem that the overall classroom furniture has reached a stuck point. This again is observed at School X (Figure 1).

In Finland, the flexible classroom is carried throughout the school, with learning taking place on the stairs, learners sat on the floor with their work and traditional desks and chairs are sparse all in an open plan designs, this has also brought forward arguments about the school layout supporting the pedagogical practices (Niemi, 2021)

Fisher (2016) notes that despite the new emerging research on the design and layout of a classroom, there is still a quantitative lack of research on layout design that is absent from scholarly rigor. Barrett et al (2015) also states in their research that there is a concerning lack of convincing literature about the implementation of combined practice on the layout of a classroom. This study hopes to address these gaps, to see how exactly the layout of classroom tables impact the specific learners in Year 4 at School X, and to understand the learner's perceptions of the tables.

Explanation of Case Study

What is Case Study research?

A case study is but one way of doing research, other ways include experiments, surveys, histories and the analysis of information. Yin (2018) states that case studies are the preferred strategy of conducting research when “How or “Why” questions are asked. Particularly when the focus refers to a real-life context. A case study allows researchers to collect, present and analyse data fairly. A case study represents another type of qualitative research and differ from other types in that they are “intensive analyses and descriptions of a single unit of system bounded by space and time.” (Hancock et al, 2021). Through case studies, researchers hope to gain in-depth understanding of situations and gain a meaning for those involved in the study. However, Merriam (2005) has criticized the lack of generalizability, as an individual group cannot be representative of a collective wider population. Which call the validity and reliability of the research into question. Merriam (2005) also argues that ethical issues are “intertwined” with the trustworthiness of the findings from qualitative research taken from a case study. In terms of the research being carried out in School X, the case study will be one class in the school where the furniture has not been changed or developed for some time. This means that this study does not reflect Year 4 learners across South Wales or the learners in other year groups at this school. It is of particular interest that due to the low ALN percentage in the class, that

different approaches to this study may need to be adapted for classrooms with a higher intake. As the furniture throughout progression step 3 sticks to one layout throughout the school, it is to be expected that the learners in this case study have a lower resilience to the tables being moved as opposed to other schools and classrooms where layout might be changed on a regular basis. In order to gain a representative of the participants, all learners who assent to the research, will be observed during their lessons. Then an informal interview will be held. As it would not be timely to hold these interviews with the whole class, the learners selected will be chosen based on their seating arrangements. An informal interview will also be held with the class teacher to understand their perception of how a teacher approaches this method.

Research Methods.

A case study (Yin, 2018) was chosen to allow a deeper insight into the impact the layout of tables and chairs have on learners. It is important to note that as this is a case study, there are limitations (Merriam, 2005) and the results from this do not demonstrate all classrooms across south Wales nor at School X. Using a case study (Yin, 2018) allows the layout of the tables to be changed multiple times and a comparison can be made of the impact on the specific class. Through observations, this allows for a practical examination of the classroom and semi-structured interviews with open questions, ensuring that the data will be qualitative rather than quantitative. Limitations to face-to-face interviews as suggested by Opdenakker (2006) however, is the body language and social cues of the interviewee which can lead to distorting the interview effect and results with the interviewee guiding the interviewer with their behaviour into a direction more desirable to the outcomes of the research. Despite collecting all learners' opinions through a closed question questionnaire ensuring that all learners take part, it does not however allow the learners to construct their own meaning of the situation (Cohen, 2017). Meanings, however, are culture and context bound, which is one limitation in using small groups of learners from a selective case study. Again, reinforcing that this is not

representative of the population but rather the impact of the tables from Year 4 in School X. Dixon-Woods (2001) states, that as the evidence of qualitative studies has to be synthesized, this can lead to the context being stripped out in order to obtain themes and key concepts, and that this in itself destroys the heart of qualitative research. Using semi structured interviews as opposed to questionnaires, can allow the researcher to explore issues in depth, and understand why the ideas are framed, as supported by Hochschild (2009). Interviews however, are time consuming and may be open to interviewer bias. Despite this, interviews were chosen due to the age of the pupils, being able to answer more detailed than that of younger children where a scale might have been more appropriate, and on reflection the Leuven scale could have potentially been used alongside the interview to allow both quantitative and qualitative data to be collected. Kerlinger (1965) notes that using dichotomous items achieve greater uniformity of measurement and are therefore more reliable. Yet a disadvantage to this is that they are superficial and force inappropriate responses when the respondent finds none of these applicable. These weaknesses can be overcome when used in connection with open ended questioning (Cohen, 2017), thus allowing the collection of quantitative and qualitative data. Kerlinger (1965) also argues that although the open-ended questions have numerous advantages, such as flexibility and allowing the interviewer to clear up any misconceptions, open ended questions have little restraint on the kinds and contents of answers and how they can be expressed. When using open ended questions in an interview, one technique is to use the funnel as Kerlinger (1965) quoted on a study by Sears et al (1957) where the interviewer starts with a broad question and narrows down to more specific questions. This is a method used in this research. It is important that the furniture is changed to best understand the role and impact of the table layout. Ideally, to really see if there is a layout which supports learners better. An initial observation will be held on the current layout as an almost control to the study, before the tables move. Reflecting on the history of classroom layout, it is important to understand that this shift in the tables reflects the needs of a current class, hence recreating a theatre layout seen in the 50's. As the layout must support the

teaching undergoing, and due to the need for learners to discuss their ideas and thoughts with peers. I have then created a L-design, allowing the learning to shift between teacher focus and collaboration, also making sure that no learners are directly facing each other to cause distraction whilst also allowing for collaboration when necessary. This will then evolve into the complete opposite by allowing the classroom to have three very large collaborative tables, one or two large tables was not workable due to the total of 15 tables not being able to split evenly. This would allow the effects of full collaboration working. I then moved on to create a classroom design similar to what is commonly used in progression step 1 and 2. One initial concept was to completely adapt and change the tables and chairs in the classroom, so that bean bags, and more comfortable seating would be present to support the well-being and comfort of learners in the classroom. Yet, due to the limited resources this was inaccessible. For each observation, an observation schedule was created alongside a card for each learner to have on their desk to monitor their assent throughout the observation. Then learners were selected depended on their individual seating for an informal interview, allowing the learners to discuss their opinions on the seating. The questions have allowed an understanding which seating learners preferred and why, allowing them to expand on their thoughts and also giving them suggestions on how they would like the layout.

Data Presentation and Analysis Methods(s)

Through the results of the semi-structured interviews with open questions, enough data is gathered in order to use quantitative data for the layout preference of the tables, which will be presented in the form of the table. Through thematic analysis of both the observation schedules, notes, and interviews, it will gather enough themes that can be used for qualitative data analysis. Qualitative data analysis informs how we move from the data to interpreting and explaining the research (Taylor and Gibbs, 2010), and is grounded in human experience (Nowell et al, 2017). The process of analysing qualitative data includes organizing, describing, understanding, accounting for, explaining, and making sense of

the data in terms of how the participants have defined the situation (Cohen, 2017). Patton (2002), states that there is no simple or correct way to analyse and present data when analysing qualitative data into findings. However, the data should be fit for purpose and answer the research question. Qualitative data analysis involves data reduction, which avoids a common issue of data overload via too much detail with too much material (Cohen, 2017). Due to the time restraints with this research, the most effective way is through thematic analysis (Braun and Clarke, 2017). Thematic analysis refers to the method of identifying and interpreting patterns of meaning referred to as theme, within qualitative data. It is primarily based on coding data into similar themes, to identify the different patterns of meaning (Braun and Clarke, 2017). However, sometimes when analysing qualitative data, synthesising the data collected may not be appropriate, and instead it will form a narrative analysis (Neuendorf, 2018). Since data and interpretation are intertwined, one risk is that the subjective views of the researcher might lead to them being over-selective and unfair to the situation with the data and interpretation placed on them (Cohen, 2017). A limit to using thematic analysis (Braun and Clarke, 2017) in this research, is due to the small group interviewed; one learner's perception might only be their own perception, and not to suggest that if a wider group were interviewed, they would suggest similar. Yet due to looking at common themes, it might not be coded due to it not being a frequent theme. It is then up to the researcher to not only use the thematic analysis, but also make a decision on whether or not to use the individual data or claims about language use (Nowell et al, 2017).

Ethical considerations

As the focus of this research project is working with children, ethics to ensure that the research and all data obtained must be a primary focus. Following BERA's Ethical guidelines for educational research (2018), the school and its participants will remain anonymous throughout. Following the University's Research Ethics and Integrity code of practice (2022) ensures that the research was conducted appropriately. The Education Workforce Council (EWC) ensures that all registered

practitioners have a duty of care for learners' safety and wellbeing, whilst also handling information and data appropriately. An ethics approval form was submitted in order to conduct this research due to the nature of working with a vulnerable group, in this case, children. Learners understood their research rights and had the right to withdraw at any moment throughout the research (Hurley and Underwood, 2002). Learner's assent was monitored throughout the research, via the use of a reversible card with a smiley face on it. A statement of information about the research being conducted was also delivered to parents and care givers. This was then delivered orally to all learners in the class via language appropriate to their level, ensuring that all learners understood the right to withdraw at any given time and how to use their reversible card appropriately (Appendix 3). All data was held on a password protected device and was uploaded to the university's cloud software which is encrypted. Stanley and Lundy (2022) state that using a trauma-formed approach ensures that all learners are able to participate in the study as supported by Beckett et al (2022) and Shankley et al (2023).

Results/ Analysis of results/ Discussion.

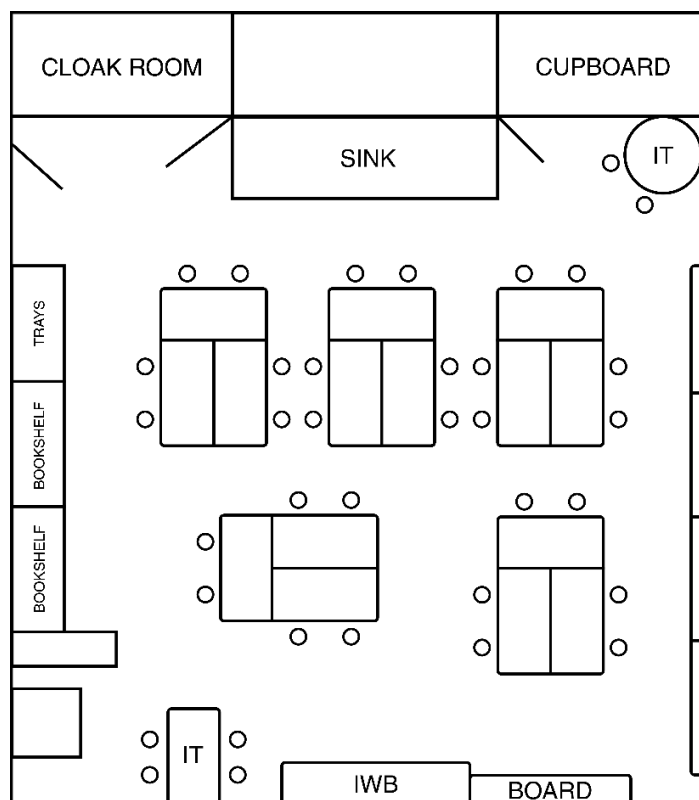


Figure 2

Floorplan of grouped tables



Figure 3

Photograph of classroom layout

Over a span of three days, the tables were moved into three main different layouts. Due to limited time available, this was less than what was originally expected or originally planned for the research. The grouped tables acted as a control (Figure 2 and Figure 3). This is the layout which is seen in Progression Step 3 throughout School X and is the layout that learners are familiar with and would behave more typically towards. The class mentor led this lesson so the high expectations in pupil behaviour (Hwb: Welsh government, 2024) would be achieved. After reflecting on the history of table layouts (Schratzentaller, 2010 and Makitalo-siegl, 2010) and classrooms from East Asia (Kim, 2018), it seemed of most value to research how the learners reacted to the tables being shifted into row formation (Figure 4 and Figure 5). To maintain the pupil well-being, it was ensured that all learners sat

next to one friend at a time. This observation was a one-hour lesson. Part of the initial research plan was that all observations focused around one subject, which could then be used to summative assess the outcomes of the pupil work (Moss, 2012). However, this was not achievable due to the time span, therefore outcomes will be measured purely from the observation and semi-structured interviews, through thematic analysis (Braun and Clarke, 2017). After planning and considering the layout of the classroom, it was decided the tables should then create an L formation (Figure 6 and 7) . A hybrid between the rows and the tables, which should allow for both teacher directed and collaborative learning. The third was going to be three large collaborative tables (Figure 8), before ideally moving to a flexible classroom as favoured by schools in Finland. These last two were unavailable, due to time constraints and limited resources.

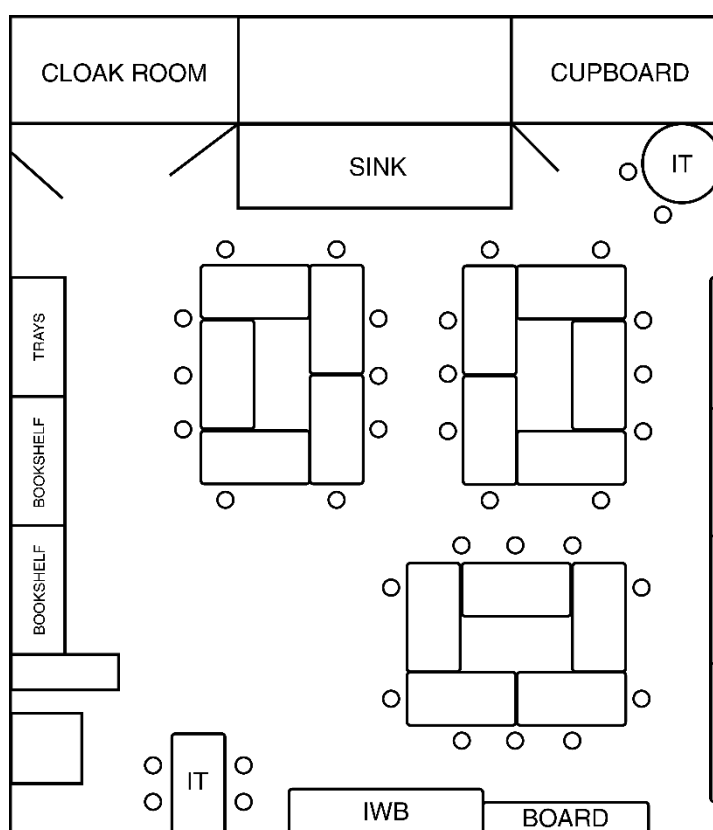


Figure 8

Floorplan of large collaborative tables.

Thematic Analysis of Rows.

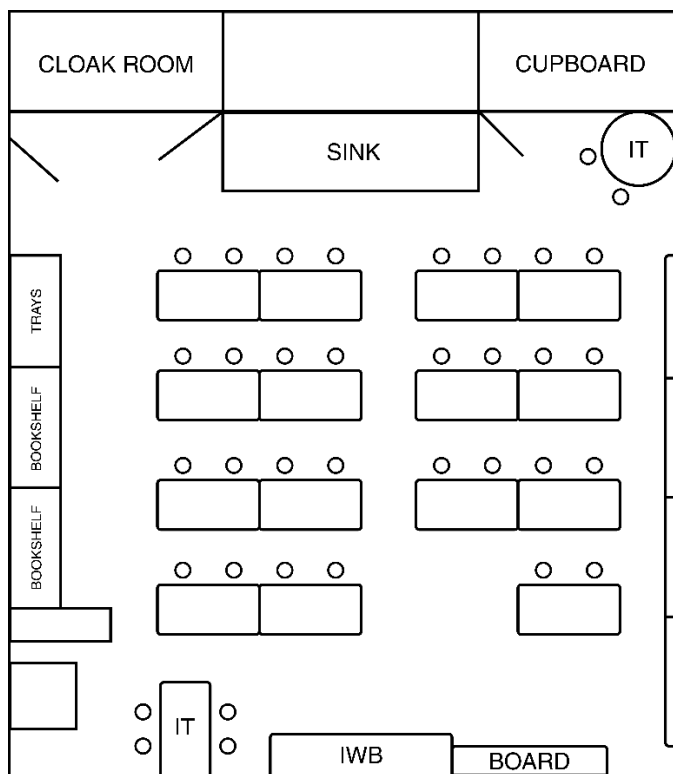


Figure 4

Floorplan of Rows



Figure 5

Photograph of Rows

Through an indepth analysis of common themes displayed in the observation notes (Appendix 4) a thematic analysis was able to take part (Braun and Clarke, 2017). First theme was the adjustment to the change and adapting to the new seating, as this was a significant change to the seating and usual group setting. The rows (Figure 4 and Figure 5) prompted independence but required adjustments for collaborative activities, this was noted most prominently during guided group reading, where learners were familiar with sitting in their grouped tables in order to listen to all learners read. Engagement and Focus. Improved attention. The tables layed out in rows led to better engagement with the teacher and the instructional whiteboard (IWB) as students did not have to turn around to see the board, as noted during the control observation. This in turn improved attention and focus in the classroom. Whilst the rows reduced peer distractions, they did however increase distractions from objects on the desk, learners that also sat at the ends of rows seemed most prone to distractions from the classroom enviroment than those with central seating. Furher observation found that the teacher did have more

room to move at the front of the class, which could enhance the learning experience, however movement between the rows was limited, and did not allow the teacher to easily move behind learners to summative assess work (Moss, 2012). The rows did benefit with facilitating think-pair-share, allowing learners to easily work in pairs, and the teacher was able to easily assess who was not participating. However when working in pairs, the noise in the classroom was far greater than that of the typical group tables, caused by learners talking over tables. Yet when learners were writing and on task, volume in the classroom was low, suggesting that the learners were focused on their work, although minimal instances of brief peer interactions. The context of the day is important to note also, as this observation was held at the end of the day which is common to learners having a lack of engagement and productivity (Pope, 2016). This disengagement could be attributed to the table layout or end of day.

Thematic Analysis of L shaped tables.

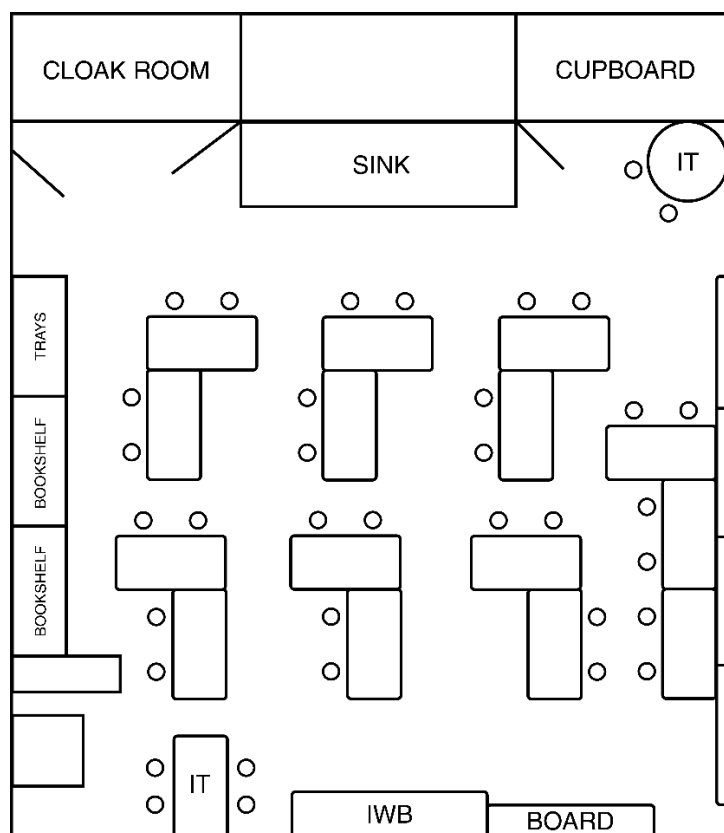


Figure 6

Floorplan of L shaped.



Figure 7

Photograph of L shaped.

(Appendix 8) The layout of this seating arrangement (Figure 6 and Figure 7) ensured that no learners had their backs to the front, an initial improvement from the group control. Most pupils demonstrated active engagement focusing on the teacher and the front, indicating that the seating arrangement facilitated attention towards the front. Learners on the vertical tables however, had to physically adjust their bodies and seats to see the teacher and IWB. Pupils also on the longer table facing the window; again an error on reflection caused by limited space, experienced more distractions demonstrating that position relative to external stimuli is crucial. Social dynamics and peer interaction. Similarly to the rows, the lack of individual boxes on each table led to distractions from items on the tables, highlighting the importance of personal storage space to minimize off task

behaviour. Common behaviour observed from learners on the vertical rows seemed unsure where to look and were more easily distracted than those positioned facing the front. In terms of peer interaction, the use of the L shaped tables shown to encourage collaboration not only within pairs, but also with the other pair, making group work of up to four easily achievable. This was an improvement compared to the rows of tables where learners were only able to ideally talk to the person next to them, and also the grouped tables where learners would need to speak over each other across the table.

Interviews, results and thematic analysis.



Figure 9

Learners preference of table layout

From the semi-structured interviews (Appendices 7 and 8), enough data was collected from table preference to allow quantitative data to be collected (Cohen, 2017). Out of the 12 pupils interviewed, rows seemed to be the most popular layout with the familiar grouped tables coming second (Figure 9). The main theme that came across the interview was the initial surprise of the tables being moved. In

particular it enhanced the mood and wellbeing of learners who had experienced a negative start to the day .

“I didn’t have a good morning, and felt the tables brightened up my day. I enjoyed walking into something new.” (Appendix 7)

There was an overall slight preference for the rows of tables due to the semiotic (sign and symbols) connotations they impacted on the learners, in particular in reference to pop culture. Many felt the rows reminded them of an American class they had seen on tv or another instance from a book or tv show, such as Harry Potter or High School Musical. Yet the spaciousness of the old, grouped tables was missed, such as the extra arm room and ease of movement. Many of the learners felt the rows were less distracting and allowed them to more easily focus on their work. All learners valued being close to friends, which positively impacted their mood. The environmental factors, rather than be seen as a distraction, positively provided comfort to learners such as being close to the radiator and window.

“If I finish my work and don’t know what to do, I can look out the window.” (Appendix 8)

Many learners preferred the rows due to the greater autonomy it provided, their sense of meaning indicated as this is a similar layout to high schools, it provided them with greater independence. One learner felt the opposite:

“I prefer the groups of tables, I want to stay young and [the rows] reminded me of comp [secondary school].” (Appendix 8)

The teacher acknowledged the learner's resilience to change and transition during his semi structured interview (Appendix 9) reflecting on the tables. The teacher also preferred the old groups of tables as it encourages collaboration within the class and doesn’t feel old fashioned such as the rows, or disorganised as the L shaped tables.

“Some cope with change and become excited, whilst others do not like it and are unable to cope very well.” (Appendix 9)

In summary, the interviews reflect a diverse range of experiences and preferences regarding the new seating arrangements. The change has introduced a sense of excitement and novelty, whilst also providing other benefits such as better views and aesthetics. It has also highlighted the importance of comfort, focus, social interaction, and the influence of pop culture on students’ expectations of their learning environment. The students’ feedback suggests a need for flexible and creative seating solutions that can accommodate different learning styles and activities.

Conclusions and recommendations

On reflection, it is felt that by using a closed multiple choice questionnaire to all participants about the seating preference would have allowed for greater quantitative data collection, and may have been more reliable than the sample of students over the preferred seating choice. Through the interviews, a greater understanding of the wellbeing and individual meanings of the study was gathered, but apart from the observation data lacking on the effect on the learning was absent. In future studies, all observations over the same subject with similar learning objectives would allow for a summative assessment, linked to recording and reporting in The 32 Teaching and Leadership strands (Welsh Government, 2019) of the work produced, in order to see which layout provided the greater learning outcomes. In future research, as well as carrying out further types of data collection, by allowing more table designs such as bigger collaborative tables will help assess the effectiveness of collaborative work, and by fully adapting the flexible classroom as noted by (Kariippanon, 2018) would allow this new design to really be pushed.

From this research it has been highlighted the positive attributes of the layout can contribute to wellbeing. The overall surprise from learners with many suggesting that the layout reflected the learning that would be taken part that day. It is important when changing the table layout that it aids the tasks and lessons and does not hinder them. One idea would be a flexible layout in which the tables can easily be interchanged prior to lessons to support both group and individual work, this would require more research into how this can easily be achieved particularly in a class such as the case study where there is an odd number of tables. By introducing rows into the learning, might help to ease learners during secondary school transition, however the learning in the class and resources will need to facilitate this. Moving the tables will allow learners to become more resilient to changes, particularly when they have become accustomed to one layout for a considerable amount of time. In future practice the layout of the tables will be carefully considered to support the learning and learners' wellbeing.

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Appendices

Appendix 1.

APPLICATION FOR ETHICAL APPROVAL

RESEARCH STUDENTS

This form is to be completed by the student within **SIX** months for full-time students and **TWELVE** months for part time students, after the commencement of the research degree or following progression to Part Two of your course.

Once complete, submit this form via the ***MyTSD Doctoral College Portal*** at (<https://mytsd.uwtsd.ac.uk>).

This document is also available in Welsh.

RESEARCH STAFF ONLY

All communications relating to this application during its processing must be in writing and emailed to pgresearch@uwtsd.ac.uk, with the title 'Ethical Approval' followed by your name.

STUDENTS ON UNDERGRADUATE OR TAUGHT MASTERS PROGRAMMES should submit this form (and receive the outcome) via systems explained to you by the supervisor/module leader.

In order for research to result in benefit and minimise risk of harm, it must be conducted ethically. A researcher may not be covered by the University's insurance if ethical approval has not been obtained prior to commencement.

The University follows the OECD Frascati manual definition of **research activity**: "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications". As such this covers activities

undertaken by members of staff, postgraduate research students, and both taught postgraduate and undergraduate students working on dissertations/projects.

The individual undertaking the research activity is known as the “principal researcher”.

Ethical approval is not required for routine audits, performance reviews, quality assurance studies, testing within normal educational requirements, and literary or artistic criticism.

Please read the notes for guidance before completing ALL sections of the form.

This form must be completed and approved prior to undertaking any research activity. Please see Checklist for details of process for different categories of application.

SECTION A: About You (Principal Researcher)

1	Full Name:	Alice Lippard			
2	Tick all boxes that apply:	Member of staff:	☐	Honorary research fellow:	☐
	Undergraduate Student	☐	Taught Postgraduate Student	☒	Postgraduate Research Student
					☐

3	Institute/Academic Discipline/Centre:	Yr Athrofa – Centre
4	Campus:	SA1 Swansea Waterfront
5	E-mail address:	2307880@student.uwtsd.ac.uk
6	Contact Telephone Number:	
For students:		
7	Student Number:	2307880
8	Programme of Study:	PGCE Primary
9	Director of Studies/Supervisor:	Stephen Hadley, Sonny Singh

SECTION B: Approval for Research Activity

1	Has the research activity received approval in principle? (please check the Guidance Notes as to the appropriate approval process for different levels of research by different categories of individual)	YES	☒	NO	☐
					Date
2	If Yes, please indicate source of approval (and date where known): Approval in principle must be obtained from the relevant source prior to seeking ethical approval	Research Degrees Committee	☐		
		Institute Research Committee	☐		
		Other (write in) Stephen Hadley	☒	14/03/2024	

SECTION C: Internal and External Ethical Guidance Materials

	Please list the core ethical guidance documents that have been referred to during the completion of this form (including any discipline-specific codes of research ethics, location-specific codes of research ethics, and also any specific ethical guidance relating to the proposed methodology). Please tick to confirm that your research proposal adheres to these codes and guidelines. You may add rows to this table if needed.
1	<u>UWTSD Research Ethics & Integrity Code of Practice</u> ☒
2	UWTSD Research Data Management Policy ☒
3	<i>BERA (2018) Ethical Guidelines for Educational Research, fourth edition.</i> ☒

SECTION D: External Collaborative Research Activity

If there are external collaborators then you should gain consent from the contact persons to share their personal data with the university. If there are no external collaborators then leave this section blank and continue to section E.

1	Institution	
2	Contact person name	
3	Contact person e-mail address	
4	Is your research externally funded?	YES ☐ NO ☐
5	Are you in receipt of a KESS scholarship?	YES ☐ NO ☐
6	Are you specifically employed to undertake this research in either a paid or voluntary capacity?	Voluntary YES ☐ NO ☐
7		Employed YES ☐ NO ☐
8	Is the research being undertaken within an existing UWTSD Athrofa Professional Learning Partnership (APLP)?	If YES then the permission question below does not need to be answered. YES ☐ NO ☐
9	Has permission to undertake the research has been provided by the partner organisation?	(If YES attach copy) If NO the application cannot continue YES ☐ NO ☐

Where research activity is carried out in collaboration with an external organisation

10	Does this organisation have its own ethics approval system?	YES	☐	NO	☐
	If Yes, please attach a copy of any final approval (or interim approval) from the organisation (this may be a copy of an email if appropriate).				

SECTION E: Details of Research Activity

1	Indicative title:	How does layout design effect learning?			
2	Proposed start date:	14/03/2024	Proposed end date:	31/06/2024	
	Introduction to the Research (maximum 300 words per section) Ensure that you write for a <u>Non-Specialist Audience</u> when outlining your response to the points below: <i>Purpose of Research Activity</i> <i>Proposed Research Question</i> <i>Aims of Research Activity</i> <i>Objectives of Research Activity</i> Demonstrate, briefly, how <u>Existing Research</u> has informed the proposed activity and explain <i>What the research activity will add to the body of knowledge</i> <i>How it addresses an area of importance.</i>				
3	Purpose of Research Activity This enquiry will examine the effect on which classroom tables, chairs and the manner in which they are laid out, contributes towards learners engagement, behaviour, interactions and the overall learning experience. I am hoping to discover the semiotic importance in which all aspects of a classroom have a purposeful contributing towards the quality of learning and their impact on the learners.				
4	Research Question How does layout design effect learning? (this box should expand as you type)				
5	Aims of Research Activity				

	Improve understanding of the impact classroom layout has in a year 4 learning environment and how it contributes towards learners' engagement and attainment towards their learning, previous research has highlighted the significant role how classroom layout impacts the learning experience of students. This research has indicated that classroom layout, when used effectively can positively affect students' academic performance, social interactions, and overall engagement. In particular, spatial arrangement has shown that the arrangement of desks and chairs can influence learners' behaviour, and interaction patterns. (this box should expand as you type)
6	Objectives of Research Activity By rearranging the current classroom layout in a variety of different positions it will allow effective research into the role in which layout contributes towards learning. This will be gathered through observations, comparative judgement through work completed, and discussions with the learners and class teacher. Understanding will be developed via focused reading of professional and academic literature. My findings from this research will hope to improve my own pedagogy and impact my own professional development in the teaching profession, to understand how best to layout a classroom so that it purposefully contributes to learning outcomes and supports learners in creating a more (this box should expand as you type)
	Proposed methods (maximum 600 words) Provide a brief summary of all the methods that may be used in the research activity, making it clear what specific techniques may be used. If methods other than those listed in this section are deemed appropriate later, additional ethical approval for those methods will be needed. You do not need to justify the methods here, but should instead describe how you intend to collect the data necessary for you to complete your project.
7	The research will be undertaken by adjusting the layout of classroom tables a total of two times in which I will observe the effects on the teaching, learning and interactions of the learners. I will also observe the current layout. This will act on behalf of a control. The data will be collected via the use of a password protected personal laptop. After these I will comparatively judge the work produced from the different layouts and once all observations are completed, I will then interview learners and the classroom teacher to gain a deeper understanding of their opinion on the classroom environment and how they feel it has affected different aspects such as the teaching and learning, well-being, engagement and interactions in the class to gain a deeper insight into the impact classroom furniture plays within the classroom.

	Qualitative data collected from learners through observations such as their behaviour, interactions and the level of focus and engagement whilst they are participating in the lesson. Cohen, Manion and Morrison (2017) emphasize the importance of qualitative data obtained through observations, due to the importance of context in educational research. Work completed will also be comparatively judged after learners have completed the lesson through different desk layouts, to understand under which conditions, work was at a higher standard, this in part is evaluative research. Learners will be encouraged to take part in semi structured discussions in small focus groups containing a majority of open questions, to encourage their voice on which layout they preferred, or why they did not enjoy a certain layout. A semi structured interview with the teacher will also take place to understand their opinion on the effect of the classroom layout on the teaching and learning within the class. The research will be undertaken by myself, and to keep the environment of the class as typical as possible, the class teacher will lead the lessons in which the furniture will be arranged. This ensures that the only variable within the research is the layout of the tables. This is pivotal in ensuring the research is a fair representative. Consent will be gathered from all parents and care givers and relevant teaching staff throughout the study. Throughout the observation learners will understand that they have a right to withdraw at any given moment, should they wish not to continue. Assent will be maintained through the use of smiley faces throughout the observations and learners will not be interviewed if they no longer wish. Will gain consent and assent, participants understand that they have a right to withdraw at any given moment. These methods stated are supported by Cohen, Manion and Morrison in their guide: "Research Methods in Education" (2017), they are also supported by the "Teaching and Learning Research Methodologies in Education: A Systemic Literature Review" by Matos et al (2023). (this box should expand as you type)
	Location of research activity Identify all locations where research activity will take place.
8	Primary School in South Wales (this box should expand as you type)
	Research activity outside of the UK

2	Use of interviews?	☒	☐
3	Use of focus groups?	☒	☐
4	Use of participant diaries?	☐	☒
5	Use of video or audio recording?	☐	☒
6	Use of computer-generated log files?	☐	☒
7	Participant observation with their knowledge?	☒	☐
8	Participant observation without their knowledge?	☐	☒
9	Access to personal or confidential information without the participants' specific consent?	☐	☒
10	Administration of any questions, test stimuli, presentation that may be experienced as physically, mentally or emotionally harmful / offensive?	☐	☒
11	Performance of any acts which may cause embarrassment or affect self-esteem?	☐	☒
12	Investigation of participants involved in illegal activities?	☐	☒
13	Use of procedures that involve deception?	☐	☒
14	Administration of any substance, agent or placebo?	☐	☒
15	Working with live vertebrate animals?	☐	☒
16	Procedures that may have a negative impact on the environment?	☐	☒
17	Other primary data collection methods. Please indicate the type of data collection method(s) below.	☐	☒
	Details of any other primary data collection method: (this box should expand as you type)		

If NO to every question, then the research activity is (ethically) low risk and **may** be exempt from **some** of the following sections (please refer to Guidance Notes).

If YES to any question, then no research activity should be undertaken until full ethical approval has been obtained.

SECTION G: Intended Participants

If there are no participants then do not complete this section, but go directly to section H.

	Who are the intended participants:	YES	NO
1	Students or staff at the University?	☐	☒
2	Adults (over the age of 18 and competent to give consent)?	☒	☐
3	Vulnerable adults?	☐	☒
4	Children and Young People under the age of 18? (Consent from Parent, Carer or Guardian will be required)	☒	☐
5	Prisoners?	☐	☒

6	Young offenders?	☐	☒
7	Those who could be considered to have a particularly dependent relationship with the investigator or a gatekeeper?	☐	☒
8	People engaged in illegal activities?	☐	☒
9	Others. Please indicate the participants below, and specifically any group who may be unable to give consent.	☐	☒
	Details of any other participant groups: (this box should expand as you type)		

	Participant numbers and source Provide an estimate of the expected number of participants. How will you identify participants and how will they be recruited?	
10	How many participants are expected?	There will be a maximum of 31 participants as part of the investigation. A student observation of 30 learners and discussion with the teaching member of staff. There will also be a focus group of interviews forming a maximum total of 12 learners from the classroom. (this box should expand as you type)
11	Who will the participants be?	The participants have been identified as learners in year 4 and a member of Teaching Staff in the school. (this box should expand as you type)
12	How will you identify the participants?	The participants are identified as learners from the year 4 class who have provided assent for me to observe. The semi structured focus group interviews will be learners from the observation in groups. Again, assent will be maintained throughout the discussion, with learners understanding that at any point they have the right to withdraw. The discussions will be in focus groups no larger than 6. They will be identified by the position of their seating in the classroom such as close to the door, in the centre, at the front and back of the class to ensure that I have varied information from different learners across the positions. The adult within the research project is the class teacher, who if so consents, will participate in a discussion. (this box should expand as you type)

	Information for participants:	YES	NO	N/A
13	Will you describe the main research procedures to participants in advance, so that they are informed about what to expect?	☒	☐	☐
14	Will you tell participants that their participation is voluntary?	☒	☐	☐
15	Will you obtain written consent for participation?	☒	☐	☐
16	Will you explain to participants that refusal to participate in the research will not affect their treatment or education (if relevant)?	☒	☐	☐
17	If the research is observational, will you ask participants for their consent to being observed?	☒	☐	☐

18	Will you tell participants that they may withdraw from the research at any time and for any reason?	☒	☐	☐
19	With questionnaires, will you give participants the option of omitting questions they do not want to answer?	☐	☐	☒
20	Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?	☒	☐	☐
21	Will you debrief participants at the end of their participation, in a way appropriate to the type of research undertaken?	☒	☐	☐
22	If NO to any of above questions, please give an explanation			
	<i>(this box should expand as you type)</i>			

	Information for participants:	YES	NO	N/A
24	Will participants be paid?	☐	☒	☐
25	Is specialist electrical or other equipment to be used with participants?	☐	☒	☐
26	Are there any financial or other interests to the investigator or University arising from this study?	☐	☒	☐
27	Will the research activity involve deliberately misleading participants in any way, or the partial or full concealment of the specific study aims?	☐	☒	☐
28	If YES to any question, please provide full details			
	<i>(this box should expand as you type)</i>			

SECTION H: Anticipated Risks

	Outline any anticipated risks that may adversely affect any of the participants, the researchers and/or the University, and the steps that will be taken to address them. If you have completed a full risk assessment (for example as required by a laboratory, or external research collaborator) you may append that to this form.		
1	Full risk assessment completed and appended?	Yes	☐
		No	☒
2	Risks to participants For example: sector-specific health & safety, emotional distress, financial disclosure, physical harm, transfer of personal data, sensitive organisational information		
	1. Physical or psychological harm. 2. Emotional distress 3. Potential for discomfort and disagreement 4. Disturbance to relationships with staff 5. Risk that participants may feel coerced into giving positive or biased responses	1. I will adhere to child protection and safeguarding regulations. I will ensure informed consent and assent process are robust and thorough e.g. clarity regarding the purposes, benefits and risks of taking part in the research, ensuring that young people fully understand their own position in relation to the research, and their right to withdraw from it at any time. I will establish positive communication with parents and any gatekeepers of provision that the young people attend. I will work collaboratively with them in promoting an understanding of the research purposes, and the rights of the young people participating in it, and those that chose not to do so. I will ensure that interviews are conducted on a one-to-one basis in a safe and private space, in which participants can express themselves freely without fear of recrimination from staff or peers. I will ensure robust procedures for maintaining the confidentiality and anonymity of all participants to the research are followed. I will avoid	

		revealing any stigmatising information regarding any of the participants, ensuring that their participation remains confidential. I will ensure procedures for data storage are in accordance with university procedures and ethical guidelines. 2. I will ensure access to appropriate support should this become evident and reconsider/revise the approach being taken. I will work with gatekeepers in clarifying the availability of support services for those participating in the research. I will work collaboratively with gatekeepers in exploring any issues that may arise in the interviews which may be a cause of distress to each of the young people taking part in the research. I will be clear with the young people regarding the conduct of the interviews, the area to be covered, and their rights to stop the interview or withdraw from it at any time. I will consult with staff, parents/guardians, to gain an understanding of personal circumstances of the young people participating in the research in order to ensure that the interviews are conducted in a sensitive way, and that the interview subject matter does not cause distress. I will ensure, as fully as possible, that participants understand the nature of the research, its purposes, and possible implications in order to avoid misunderstandings and manage expectations. I will ensure that regular follow up communication with participants is in order to re-affirm consent and to update them on the progress of the research. 3. To avoid discomfort and disagreement during the focus group discussion, I will develop a discussion guide which will define the parameters and scope of the questions being discussed. Participants will be given a participant
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		information sheet intended to remind them of the following: Context and background to the research; Purpose of the discussion; Research questions; Informed Consent; Specific questions/statements to be addressed; Use of the data gathered in the discussion; Closure and briefing on the use of the information and data gathered in the discussion. I will moderate the discussion, providing reminders throughout as to the purpose of the discussion as to ensure professional decorum is maintained in line with UWTSD codes of conduct. During the discussion about the classroom layout, if group members begin to be critical in a way that exposes participants to any degree of risk to the reputation of individuals or UWTSD, I will remind group members of their obligations with regards to professional conduct. 4. I will ensure clarity with all young people and staff/gatekeepers regarding the aims and focus of the research. I will minimise disturbance of day-to-day activities within the provision due to the research project. I will ensure confidentiality and anonymity of those participating in the research at all times. I will ensure appropriate and secure storage of data. I will reassure participants that the information that they provide will not be disclosed without their consent. I will ensure interviews are conducted in a suitably confidential environment. I will work with gatekeepers to promote an understanding of the nature of the research, and to gain assurances that the young people's participation in it is fully supported and will not result in recrimination by staff or peers. 5. Prior to the group interview, participants will be provided with a participant information sheet with which informed consent will be
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		sought. To avoid the risk of participants feeling coerced, a debrief and synopsis transcript of the discussion will be available to participants following the discussion. <i>(this box should expand as you type)</i>
3	If research activity may include sensitive, embarrassing or upsetting topics (e.g. sexual activity, drug use) or issues likely to disclose information requiring further action (e.g. criminal activity), give details of the procedures to deal with these issues, including any support/advice (e.g. helpline numbers) to be offered to participants. Note that where applicable, consent procedures should make it clear that if something potentially or actually illegal is discovered in the course of a project, it may need to be disclosed to the proper authorities	
	<i>(this box should expand as you type)</i>	
4	Risks to the investigator For example: personal health & safety, physical harm, emotional distress, risk of accusation of harm/impropriety, conflict of interest	
	Risk to the investigator: 1. Allegations while conducting interviews. 2. Accusations of fabrication or falsification of data 3. Concerns of coercion 4. Participants may wish to withdraw. 5. A possible conflict of interests between the researcher and participants 6. A confidentiality breach due to data being released accidentally. 7. Risks relating to the possibility of unexpected negative emotions of the interviewees. <i>(this box should expand as you type)</i>	<i>How you will mitigate the risk to the investigator:</i> 1. I will ensure access to a suitable space that secures the confidentiality of the of the participant contributions, whilst also being visible to other colleagues. 2. I will clarify with participants regarding access to transcripts of interviews or field notes. I will ensure debriefing with participants to include recapping on and clarifying where necessary the contributions that they have made. I will work with gatekeepers to promote a comprehensive understand of the nature of the research project. 3. I will ensure that it will be made explicit that participants are free to disengage and that in that event, this will not impact on assessment or

		outcomes of their programme of study. 4. In the case of withdrawal from the student group, discussions would be conducted with the remaining participants and new participants will be recruited, if necessary, who will be fully briefed, and whose informed consent will be sought. For the case of a withdrawal from the staff group, a nominee will be sought in the relevant department/specialism. 5. Where there is a potential conflict of interest between the researcher and the participants, for example the researcher may be involved in some aspect of the assessment of participants work, the researcher will not assess that participant's work. 6. The research will be stored on the UWTSD cloud and any recordings, data or transcript will be password protected in electronic folders on UWTSD systems and subject to university protocols. However, GDPR statements will be included in any participant information and consent and that the researcher has completed training on GDPR and will ensure that all records are kept in secure cloud locations as a precaution and not on any hard drive. 7. I will be cautious about the places to have interviews and choose quiet and public places. I will ensure that the participants are assured that all the personal data of the participants are securely stored in the safe place such as a password protected device. I will ensure that all the related laws and regulations should be carefully studied before the research activities to avoid unintentional misconduct that arouse suspicion and antagonism from authorities.
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		(this box should expand as you type)		
5	University/institutional risks For example: adverse publicity, financial loss, data protection			
	Risk to the University: 1. Reputational damage <i>(this box should expand as you type)</i>	How you will mitigate the risk to the University: 1. I will ensure adherence to the UWTSD code of ethics and research standards and commonly agreed standards of good practice. I will ensure compliance with data storage regulations and university guidelines and security procedures. I will ensure that research methodology is robust and that methods are appropriate. I will adhere to the UWTSD code of conduct and also the EWC code of conduct. I will establish clarity regarding procedures on reporting of disclosures in field work settings. I will work with partners to promote a comprehensive understanding regarding the nature of the research in order to avoid misunderstandings and manage expectations. <i>(this box should expand as you type)</i>		
6	Environmental risks For example: accidental spillage of pollutants, damage to local ecosystems			
	Risk to the environment: 1. Use of paper Travel - carbon footprint <i>(this box should expand as you type)</i>	How you will mitigate the risk to environment: 1. This research activity will mostly use electronic systems reducing the need for bleached paper and need for travel. <i>(this box should expand as you type)</i>		

	Disclosure and Barring Service			
	If the research activity involves children or vulnerable adults, a Disclosure and Barring Service (DBS) certificate must be obtained before any contact with such participants.	YES	NO	N/A

7	Does your research require you to hold a current DBS Certificate?	☒	☐	☐
8	If YES, please give the certificate number. If the certificate number is not available please write "Pending"; in this case any ethical approval will be subject to providing the appropriate certificate number.	001834224192		

SECTION I: Feedback, Consent and Confidentiality

1	Feedback What de-briefing and feedback will be provided to participants, how will this be done and when?
	On request, I will be able to share headline findings from my research. Feedback from the research will also be submitted to the university and feedback from the research will be given to the class teacher after the research has been collected pseudonyms <i>(this box should expand as you type)</i>
2	Informed consent Describe the arrangements to inform potential participants, before providing consent, of what is involved in participating. Describe the arrangements for participants to provide full consent before data collection begins. If gaining consent in this way is inappropriate, explain how consent will be obtained and recorded in accordance with prevailing data protection legislation.
	Consent will be acquired from a written consent form sent to parents and caregivers of learners. Written consent will also be collected from teaching member of staff. Assent will be maintained throughout the observation, via the use of visual assent such as. smiley faces. This will also be used to maintain that students are willing to be interviewed about the study. Students will also be reminded of their right to withdraw throughout. <i>(this box should expand as you type)</i>
3	Confidentiality / Anonymity Set out how anonymity of participants and confidentiality will be ensured in any outputs. If anonymity is not being offered, explain why this is the case.
	As according to BERA, the school will be anonymised throughout and will not be referred by name, this will also apply to individual learner names and the names of the teacher involved.

	(this box should expand as you type)
--	--------------------------------------

SECTION J: Data Protection and Storage

	Does the research activity involve personal data (as defined by the General Data Protection Regulation 2016 “GDPR” and the Data Protection Act 2018 “DPA”)?	YES	NO
1	“Personal data” means any information relating to an identified or identifiable natural person (‘data subject’). An identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person. Any video or audio recordings of participants is considered to be personal data.	☐	x
	If YES, provide a description of the data and explain why this data needs to be collected:		
2	(this box should expand as you type)		
	Does it involve special category data (as defined by the GDPR)?	YES	NO
3	“Special category data” means sensitive personal data consisting of information as to the data subjects’ – (a) racial or ethnic origin, (b) political opinions, (c) religious beliefs or other beliefs of a similar nature, (d) membership of a trade union (within the meaning of the Trade Union and Labour Relations (Consolidation) Act 1992), (e) physical or mental health or condition, (f) sexual life, (g) genetics, (h) biometric data (as used for ID purposes),	☐	x
	If YES, provide a description of the special category data and explain why this data needs to be collected:		
4	(this box should expand as you type)		

	Will data from the research activity (collected data, drafts of the thesis, or materials for publication) be stored in any of the following ways?	YES	NO
5	Manual files (i.e. in paper form)?	☒	☐
6	University computers?	☐	☒
7	Private company computers?	☐	☒
8	Home or other personal computers?	☒	☐

9	Laptop computers/ CDs/ Portable disk-drives/ memory sticks?	☒	☐
10	"Cloud" storage or websites?	☒	☐
11	Other – specify:	☐	☒
12	For all stored data, explain the measures in place to ensure the security of the data collected, data confidentiality, including details of backup procedures, password protection, encryption, anonymisation and pseudonymisation:		
	All data will be kept in a password protected personal computer. All participants will be given a unique identifier to ensure confidentiality and this list will be kept securely in the password protected folder. If any cloud storage is needed, the University Office 365 system will be used, which will be encrypted and the data in the cloud is anonymised. The data will be stored until receipt of the assignment result and then deleted. Participants will have the right to ask to see what data is held relating to them and the data will be deleted immediately if the participant requests this, in which case the data will not be used in the project. Signed informed consent forms in paper form will be kept in a locked file cabinet and will be unavailable to anyone except the researcher. On receiving the feedback and mark for this piece of work, the signed informed consent forms will be destroyed. <i>(this box should expand as you type)</i>		

	Data Protection		
	Will the research activity involve any of the following activities:	YES	NO
13	Electronic transfer of data in any form?	☒	☐
14	Sharing of data with others at the University outside of the immediate research team?	☒	☐
15	Sharing of data with other organisations?	☐	☒
16	Export of data outside the UK or importing of data from outside the UK?	☐	☒
17	Use of personal addresses, postcodes, faxes, emails or telephone numbers?	☐	☒
18	Publication of data that might allow identification of individuals?	☐	☒
19	Use of data management system?	☒	☐
20	Data archiving?	☐	☒
21	If YES to any question, please provide full details, explaining how this will be conducted in accordance with the GDPR and Data Protection Act (2018) (and any international equivalents, where appropriate):		
	Each participant's data from interviews, class observation and questionnaire will be stored in a secure place in a password protected personal computer or the University Office 365 system which will be encrypted. All personal identification will be removed or anonymised during transcription. <i>(this box should expand as you type)</i>		
22	List all who will have access to the data generated by the research activity:		
	Data generated will be stored on a password protected personal computer that only the researcher has access to, any data stored digitally such as the cloud will be done so via the University Office 365 system which will be encrypted. Signed, paper consent forms will be locked in a file cabinet		

	unavailable to anyone except the researcher, which will be destroyed once the mark and feedback for this piece of work is received. <i>(this box should expand as you type)</i>		
23	List who will have control of, and act as custodian(s) for, data generated by the research activity:		
	The researcher will have control of, and act as custodian for data generated by the research activity. <i>(this box should expand as you type)</i>		
24	Give details of data storage arrangements, including security measures in place to protect the data, where data will be stored, how long for, and in what form. Will data be archived – if so how and if not why not.		
	Data will not be archived throughout the research. Data stored will be so in a password protected personal computer, and data stored digitally in platforms such as the cloud will be done so via the University Office 365 system which will be encrypted. Signed paper consent forms will be locked in a file cabinet. All data will be destroyed once the mark and feedback for this piece of work is received. <i>(this box should expand as you type)</i>		
25	Please indicate if your data will be stored in the UWTSD Research Data Repository (see https://researchdata.uwtsd.ac.uk/). If so please explain. <i>(Most relevant to academic staff)</i>		
	No, data will not be stored in the UWTSD Research Data Repository. <i>(this box should expand as you type)</i>		
26	Confirm that you have read the UWTSD guidance on data management (see https://www.uwtsd.ac.uk/library/research-data-management/)	YES	☒
27	Confirm that you are aware that you need to keep all data until after your research has completed or the end of your funding	YES	☒

SECTION K: Declaration

	The information which I have provided is correct and complete to the best of my knowledge. I have attempted to identify any risks and issues related to the research activity and acknowledge my obligations and the rights of the participants. In submitting this application I hereby confirm that I undertake to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice which is published on the website: https://www.uwtsd.ac.uk/research/research-ethics/		
1	Signature of applicant:	A. Lippard	Date: 15/03/24

For STUDENT Submissions:

2	Director of Studies/Supervisor:		Date:
3	Signature:		

For STAFF Submissions:

4	Academic Director/ Assistant Dean:		Date:
5	Signature:		

Checklist: Please complete the checklist below to ensure that you have completed the form according to the guidelines and attached any required documentation:

☒	I have read the guidance notes supplied before completing the form.
☒	I have completed ALL RELEVANT sections of the form in full.
☒	I confirm that the research activity has received approval in principle
☐	I have attached a copy of final/interim approval from external organisation (where appropriate)
☐	I have attached a full risk assessment (where appropriate) <i>ONLY TICK IF YOU HAVE ATTACHED A FULL RISK ASSESSMENT</i>
☒	I understand that it is my responsibility to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice.
☒	I understand that before commencing data collection all documents aimed at respondents (including information sheets, consent forms, questionnaires, interview schedules etc.) must be confirmed by the DoS/Supervisor, module tutor or Academic Director.

RESEARCH STUDENTS ONLY

Once complete, submit this form via the **MyTSD Doctoral College Portal** at (<https://mytsd.uwtsd.ac.uk>).

RESEARCH STAFF ONLY

All communications relating to this application during its processing must be in writing and emailed to pgresearch@uwtsd.ac.uk , with the title 'Ethical Approval' followed by your name.

STUDENTS ON UNDERGRADUATE OR TAUGHT MASTERS PROGRAMMES should submit this form (and receive the outcome) via systems explained to you by the supervisor/module leader.

Appendix 2.

Investigating the impact of classroom furniture on student engagement and well-being; an analysis of tables and chairs' influence on learning.

Name of Researcher: Miss Alice Lippard

Please initial box

1. I confirm that I have read and understood the information sheet for the above study. ☐
2. I understand that my child's participation is voluntary and that I am free to withdraw my child from study at any time, without giving any reason. ☐
3. I understand that my child can choose to withdraw at any time, without giving a reason. ☐
4. I understand that the information given by my child will be used in a university assignment. ☐
5. I understand that my child's name will not appear at any time. ☐
6. I agree for my child to take part in the above study. ☐

Pupil's name

Parent signature

Date

Relationship to Pupil

Information Sheet

Investigating the impact of classroom furniture on student engagement and well-being; an analysis of tables and chairs' influence on learning.

Dear Parents / Carers

My name is Alice Lippard and I am studying for a PGCE qualification at Yr Athrofa, University of Wales Trinity Saint David. I am currently a student teacher within Coety Primary School and I am teaching in your child's class.

I would like to invite the pupils to participate in my research project. The title of the project is "Do tables and chairs stand up in the classroom?: Analysing the impact of classroom layout." I aim to research the impact (if any) that classroom layout, such as tables and chairs has on a pupil's ability to learn. Through your child's participation, I hope to ascertain their perspective on the arrangement of the classroom and its potential influence on fostering interactions and overall well-being, along with the impact it might have on pupil's educational growth and advancement.

Pupils will be asked to take part in an observation by me, whilst their class teacher (Mr Lewis) is leading the class. After these observations the pupils will then be chosen to be interviewed to discuss their opinion on the seating, questions such as "Did you prefer sitting in a group or in a pair? How would you change the layout in the future?" The interviews will not be recorded, and all confidential evidence will be destroyed once the research has been completed. I will be following the university's ethic guide and in accordance with BERA's Guidelines for Educational Research. (2018).

All names will be kept strictly confidential and will only be known by me and my research partner. The pupil's participation in this study is completely voluntary. You or your child can withdraw from the study at any stage. Pupils will be asked to give their consent before the beginning of the study. Their consent will also be monitored throughout the research through the use of response cards.

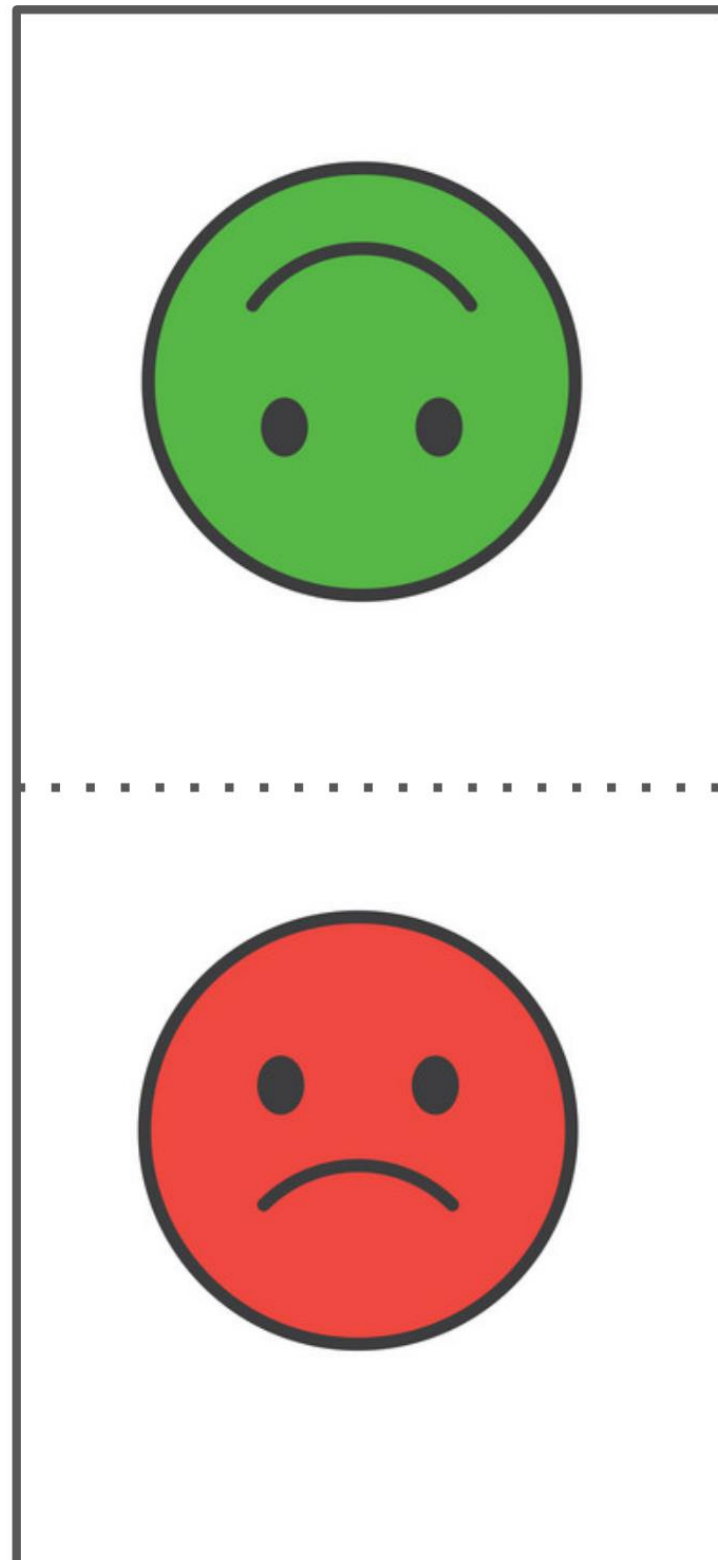
After careful and precise analysis of the data obtained from the lesson observation and group interview, I would be happy to provide you with a copy of the findings at your request. The results of the research will be discussed in a university assignment that will contribute to my PGCE course. The results of this study will be stored on the University's Microsoft 365 online cloud, which is encrypted. All raw data will be destroyed once the assessment has been marked. I thank you in advance for your time. If any questions do arise, feel free to contact me at your convenience.

Yours sincerely,

Alice Lippard

PGCE Student

Appendix 3.



Appendix 4.

Observation Schedule

Date: 30/04/24

Time: 13:21

Observer: Alice Lippard

Lesson: Science and Technology

Table layout: Rows

Input : All learners were engaged with eyes on the teacher, no learners were distracted by other learners in the classroom. 14:18. Teacher begins to write on the white board, to instruct learners what is going on.

During the lesson input, with the IWB on display, all learners were looking towards the board which is an improvement to that of the two learners who would previously have to turn their seats around in order to see. Able to observe the teaching having more room at the front of the class than previously, which allowed them to move around more, and give more demonstrations such as jumping off a chair to demonstrate gravity. After 15 minutes, I was able to observe that all learners' eyes were still engaged with the teacher and eyes faced forward.

Activity: . Being in the rows during think pair and share, ensured that all learners were talking to a partner and was easier to scan and see who was not talking . Even those in a three, were able to join the pair next to them far easier than when they were sat on the groups of tables. 14:26 Learners begin their writing. Noticed all learners with their heads down writing, and being engaged in their work.

Disruptions: Noticed some learners on the edges of their seats, looking away at the sides of the classroom. 14:18 . However it was noticeable, that at least 6 learners were not looking at the teacher or the white board. This might be however due to the context of the lesson being at the end of the day, as many learners were bored. However could this also be due to the seating plan, and learners not being as engaged with their learning, despite their concentration being more on the teacher. One learner was observed picking his nose, while another was seen staring out the window for approximately 1 minute. These again are two M.A.T students who otherwise would not be so easily distracted. Distractions were present, however rather than this be other learners, this was from objects in their desk in front of them such as paper and rulers. This also happens during the flexible table design. Which is not an anomaly. Learner in the back row did not involve himself with think pair and share, and instead focused in front of him. one learner was observed turning his chair around to ask a peer, this was a very short interaction which did not lead into a long conversation. When writing, one child turned his chair around and looked at the clock for 40 seconds.

Additional notes: : Tables were moved this morning, which has allowed learners to settle throughout the morning, into their new seats and adjust to the drastic change in scenery. At certain activities throughout the day, rows have not supported the lesson or learning, and has hindered it. Such as Guided Group reading. Learners are used to being able to sit on their table and share the work in a

group setting, yet when this was adjusted to the rows, learners had to adapt to fit the need of the layout. Having to turn the tables around and face each other, rather than automatically face each other. Volume in the class when on task was minimal, this is an indication to show that all learners were concentrating on their work rather than distracted and discussing with peers. This was not because of any instruction about noise given by the class teacher.

Appendix 5.

Observation Schedule

Date: 02/05/24

Time: 9:10.

Observer: Alice Lippard

Lesson: Mathematics and Numeracy.

Table layout: L Shaped

Input : Initial reaction “Not again” and “Why an L.” Learners seemed excited and surprised. One learner seemed very disappointed by this table formation. Mini Whiteboards. Most learners having to turn their body and seats in order to see the teacher and the front of the board. No learners have their back to the front which is an improvement from the beginning. One learner observed distracted by drawing on a whiteboard rubber (M.A.T learner, sat at the back, left table, facing the front.) Learners positioned on the vertical table, were observed looking at peers on the adjacent table. All pupils look engaged with the teacher and keeping eyes focused on the front. Few are distracted for brief moments with objects in front of them.

Activity: All learners seemed to be able to focus and engage with their work. Some learners were observed staring into space/daydreaming. Again most present on the vertical tables facing downwards.

Disruptions: Pupils on the longer vertical, had the biggest issue with distribution. This is due to the a larger amount of pupils. They are also facing the window, which is a possible distraction. Biggest concern is the learners is on the tables facing forward. With seeming to not understand where to look. Many again are more easily distracted by items on the tables, this might be caused by items normally being kept in individual boxes, and throughout this experiment, their was not enough boxes to include the boxes into the research. Pupils were still observed discussing across the different tables. One learner who was sat on a vertical table, was observed turning his chair to face forward away from this desk.

Additional notes: : Learners positioned on the vertical table, were observed looking at peers on the adjacent table. Noise was not as loud as the grouped tables however it was observed some learner still talking across the tables. Limited space around the class made it harder for the teacher to navigate to assess learners work.

Appendix 6.

Observation Schedule

Date: 01/05/24

Time: 9:40

Observer: Alice Lippard

Lesson: Mathematics and Numeracy.

Table layout: 5 Grouped Tables (Control)

Input : Learners all seemed engaged with the teacher. However learners who are facing each other, need to adjust their chair and body in order to see the IWB correctly. As learners are sat in pairs, learners are able to easily discuss using think pair share. During input, learners are more able to discuss with peers, and causes teacher to reinforce expectations. In order for teacher to be able to view everyone mini whiteboards, teacher needs to move around the class. Layout allows movement freely, however can be difficult between the middle back table.

Activity: 9:55 Resources are all kept in a box, one for each table. This results of minimal distractions on tables by items in front of them. Due to different differentiation on tables, learners who need support from a teacher have to move onto the one at the front. This table becomes overcrowded with as many as 9 learners sat around one table. Learners throughout the task engage with peers minimally. All learners seem to have their head down, however due to resources being shared in the box, learners are stood up to reach them, rather than have their pack in front of them, as they keep putting it back into the box. No learners are observed as daydreaming or zoning out.

Disruptions: Two learners at the front, sit with their back to the teacher and the board. Despite being at the front, they seem to constantly need to be reminded to stop talking and playing with items. This might be due to the fact their back is to the teacher despite being at the front. If a learner is absent think pair share becomes difficult and means having to move the learners to different seats, teacher also needs to constantly rotate around the class to ensure all learners are discussing during think pair share. Learners are more prone to shout out during the input. Learner using the multiplication grid on the table, results in them having to leave their chair and move out of their seat.

Additional notes: Familiar layout, so no transitions needed. Noise is kept minimal, however learners tend to discuss more on their table.

Appendix 7.

Pupil Interviews, After Row Layout.

What was your initial reaction to the tables?

Child 1: I didn't have a good morning, and I felt the tables brightened up my day, and enjoyed walking into something new.

Child 2: I walked in and thought "What was going on" and then it reminded me of high school musical. I originally sat on the table right at the front on it's own before being moved. I prefer sitting at the front as it's less distracting for me and *another pupil* It just reminded me of an American high school.

Child 3: Very shocked and thought "What happened" . The tables have changed and thought it does look nice and the seating arrangements are nice and gives us more space to move around. I kept thinking "What's going on" and "What's going to happen next."

Child 4: I was shocked to see the tables changes, as I've never seen them in rows. I didn't really mind it. I like all the tables, and I like these as they are in lines. This reminded me of America.

How do you feel about where you were placed?

Child 1: Quite good, as when you are placed at the front you need more support, whilst the back is more independent.

Child 2: It was nice to be at the back and have a different partner than previously. I'm so happy to be with another girl.

Child 3: Doesn't bother me where I am sat, as long as I can hear the teacher.

Child 4: I like it, I'm next to one of my friends, so I'm very happy and surrounded by my friends. I didn't find it distracting. It's easier to focus on the tables, particularly as I'm on the edge, as the edge is the best seat, as I can see everything,

How did you feel about the tables in rows?

Child 1: I think it was good, but in GGR was not as it is group work. I also felt very close to people in my class. Only place to move freely is down the middle like a catwalk. I think the rows are less distracting than the groups. Around the table I felt like you could easily talk and be distracted, yet in the rows I was not opposite them, so more of my focus could be on my work.

Child 2: I found the tables too tight together with limited room between them. I really like the catwalk and lots of room at the front, but as I'm sat on the side I keep staring at the bookcase. The boxes also don't fit the tables.

Child 3: It feels very different, through the whole school the tables have never been in rows. It feels very new and different. I like it because it's new and gives us more space to move around, but I don't like it because it feels weird. Feels like there is less people and more spacious.

Child 4: I like them, I think they are fine, particularly as I am close to my friends, and I feel that it looks a lot smarter rather than groups of square tables.

What is your favourite table layout?

Child 1: I like the rows as it reminded me of the classrooms in Harry Potter.

Child 2: I liked it and felt more grown up. I didn't like the groups of tables because they were too big and now they are smaller, in rows of 4.

Child 3: I like both, but I prefer the rows because it is different.

Child 4: The rows. They just look better.

If you could change the layout in anyway, what would you do?

Child 1: I think it could be two people sat at the end to easily switch to collaboration work. And boy, girl seating so they don't talk as much.

Child 2: I would have small donuts of tables.

Child 3: Couple of small tables and some either side by the windows, then one table at the back.

Child 4: I would just like to have a table at the back, and on the sides, but I think the rows are fine.

How did the tables make you feel? (Well-being).

Child 1: Gave me a positive perspective of my day and became a new thing to look forward too.

Child 2: Alright, I found it exciting at first, and it made me curious what the tables could be moved like in the future, I was still able to talk to friends.

Child 3: It makes me feel a lot more spread out and that I can breathe and not have people all beside me. I feel a little bit calmer. It is sorta harder to talk to peers, but I can still do it.

Child 4: I would just like have a table at the back, and on the sides, but I think the rows are fine.

Appendix 8.

Pupil Interviews, After L Layout.

What was your initial reaction to the tables?

Child 5: I was shocked, as this was the second time this week the tables had been moved.

Child 6: Surprised, but I like how the tables are shaped. Because it feels like there is more room to work and I don't feel as squashed.

Child 7: Surprised and happy, first I was surprised as I didn't expect them to move, and then happy as I was sat with friends.

Child 8: "what happened" and it added surprise over what we were going to do.

Child 9: Quite surprised as this is kind of different to how we normally have the tables.

Child 10: "What are we doing that involves L shaped tables". "What are we doing that involves rows."

Child 11: I saw the rows "Omg what's happened, where am I going to sit" "Oh my gosh, where do I sit?" As I wasn't sure where I would sit on the L's, and thought it looked like maze."

Child 12: When I saw the rows I thought "What happened to this class, is it American?" When I saw the L's I really liked it and hoped I was sat by friends and it made me very happy when I realised I was.

How do you feel about where you were placed?

Child 5: I feel like I am in the best spot as I have the best view of the front.

Child 6: I feel great being sat on the long table, if I finish my work and don't know what to do I can look out the window or the sculptures. I do not find it distracted. But I can chat more.

Child 7: It was a good table layout as I was sat with my friends. I preferred the rows the most. Because you could walk through easier and I was easily able to navigate.

Child 8: Rows: very squished not enough space to work, as it was one long row. Again, with the L's I feel as though there is not enough space, and I'm too close to other people from other tables and we are too close so it's hard to concentrate on my work.

Child 9: I liked the rows, as it was old fashioned don't like the L's as it looks messy and is not very spacious. Quite surprised as this is kind of different to how we normally have the tables.

Child 10: I feel nice as we have a great window view for wet plays and I enjoy looking out the window, but not when the teacher is teaching.

Child 11: I felt a bit fine but the radiator got quite warm, there was tech behind so people rushed and I couldn't see the board very well. I am happy because I'm in the middle of L's it looks like a maze for me even just to get tech.

Child 12: I was second two front in, in the middle for rows , and now I am on the horizontal extra long table, which I really like.

What is your favourite table layout?

Child 5: I prefer the L's. It looks good and feels good. It seems better. It's a bit more space compared to the ginormous tables put together as there was not enough space.

Child 6: I like the L shape better than the rows but I like the groups better than all. I like the groups the best because I've had them in every class and it is comfortable and familiar.

Child 7: I found the rows distracting as the sculptures were next to me. I prefer the L's. as it makes me happy and being close to friends for the first time.

Child 8: I don't have a preference over all the tables. But the rows made me the happiest.

Child 9: The groups, it's more spacious and a bigger table so more people are able to help me when I don't understand.

Child 10: Old groups because they are spacious and the L tables and the rows do not have enough arm space as I write with my elbow on the table.

Child 11: The groups of tables, because it was more spacious as the rows were hard for GGr and as I want to stay young, it reminded me of comp.

Child 12: I prefer the L's, because it looks more better and it's like your thinking that you always know where you are and what you are suppose to do and be. But the L's feel different but good.

If you could change the layout in anyway, what would you do?

Child 5: Donuts little donuts for everyone to sit around. Because it's more fun for people and easier to walk around.

Child 6: Armchairs with a table in front.

Child 7: I would have tables of three so I could sit with my friends. I would put like two on the right and two on the left.

Child 8: Two tables and then a four.

Child 9: The old, large groups of tables like previously.

Child 10: Two people per table, all facing the board.

Child 11: Two per table, all on bean bags, facing the front.

Child 12: Two massive big tables.

How did the tables make you feel? (Well-being).

Child 5: Not easily distracted as less people on a table, as there was a lot of people they use to distract me. Easier to talk to people in the L's as I kinda feel like it's easier to talk people because it always use to be someone else talking.

Child 6: I think it's easier to talk to peers on the L shape which makes me happy.

Child 7: it made you happy as I was able to chat to friends so they could help me.

Child 8: The rows because it was fun however the big tables was the best. The worst is the L's, because it is not very spacious and not enough room to walk about.

Child 9: The groups, most positive as I'm a book monitor it's easier to hand out books. The L's, a little bit confusing.

Child 10: The old groups had the most positive impact as lots of arm room, and more space for more people which is easier because we don't have to move chairs a lot.

Child 11: groups made me the happiest as I could move around more and I could get around the class more easier. Quite hard to fit through the L's.

Child 12: The L's made me the happiest because it's better to see the board and on the side, and not many people in front of me.

Appendix 8.

Teacher Interview.

How do you think the learners reacted to the tables being changed?

Some cope with change and become excited, while there are some of the learners who do not like it. I felt the rows of tables were very squished and did not allow enough room for movement, but I think moving the tables regularly and their individual seating can build resilience in the learners and stop them feeling ownership over individual seats and tables. This can also help them to socialise with new peers.

How did you feel about the rows of tables?

I felt the rows of tables was an old school approach, they limited collaboration, limited movement. It was a strain on resources as greater is needed.

How did you feel about the L shaped tables?

The L shape, felt disorganised and messy. It also resulted in four learners having to have their back turned away facing out the window.

Which table layout did you prefer, or is there a particular layout you are more fond of?

I prefer the groups of tables as it allows more movement encourages collaboration within the class.