

Target 1	Include more literature in my work (from at least six different sources).
Target 2	Use literature that contrasts with other literature and compare these with each other.
Target 3	Make sure that I am referencing correctly.

A critical analysis and evaluation of the observation research tool, 'Leuven Scale'

Research conducted in Foundation Phase pupil environments can take place in a number of classroom areas, both indoor and outdoor, looking at a wide range of different learning experiences, such as play, outdoor learning, independent tasks and stereotypical teacher-led lessons. In this case, my research looked at using the Leuven scale in order to evaluate its effectiveness as an observational research tool.

My chosen area of research looked at children's engagement during observation, comparing if engagement was higher during independent or teacher-led tasks, specifically trying to answer the question of 'how does working independently with minimal adult intervention vs participating in adult-led work impact pupil's engagement within the foundation phase?' Observing children, especially in order to improve their education, is regarded by most as "a key role in the everyday practice of practitioners working with children" (Department for Children, Education, Lifelong Learning and Skills, 2008, p.7). This is for a number of reasons, for example, the Department for Children, Education, Lifelong Learning and Skills state that "*the main purpose of observing children is to determine where they are on the learning continuum in order to move them along, and to identify any difficulties, misinterpretations or misunderstandings*" (2008, p. 6). Whilst this may be viewed as the main purpose for the importance of observing children, there are many other factors which also add to its importance. These include: discovering pupil's interests and preferences, seeing what strategies pupils use to attain their goals and learning about their personalities and temperaments (Foreman & Hall, 2013, p.188) All of these factors help us as researchers and practitioners to apply findings and observations in order to improve the education and experiences of pupils by catering to their individual needs within the classroom, and using any learnt information to improve our professional practice by including pupil's interests into lesson plans etc. On the other hand, whilst the usefulness in observing children in order to benefit how we teach as practitioners and benefit pupil's experience in school isn't widely disputed, there are a number of reasons as to why observations can be unsuccessful, and therefore prove not as useful as they have the potential to be. For example, "*observational data [is] often highly unstructured and therefore difficult to analyse, [there is] potential for behaviour of participants to be influenced by the act of observation [and] even the act of participant observation is likely to incur some changes to normal behaviour*" (Cotton, Stokes & Cotton, 2010, p.466) Therefore, whilst observing children is considered to be of vital importance to a large audience of practitioners and researchers, it is undeniable that there can often be a number of faults within observational research. However, it can be also be argued that when combined with other research methods, the the risk of potential flaws significantly decreases, and as well as this, the benefits of observational research with children significantly outweigh the risks, especially when results from observational research are proven correct, as results drawn from scenarios like this allow opportunities to improve

both the education and school experience of pupils of all ages, not just Foundation Phase pupils.

The Leuven Scale as an observation tool is viewed by many as an effective way for researchers to “*assign scores for both well-being and involvement based on their observations*” (Leavers, 2011, p.1) and evaluate child engagement, particularly in the foundation phase. The Leuven Scale has proven not only effective, but also highly useful to a number of researchers. This has been shown due to the scale being used internationally in a number of large scale research projects, for example, over 50,000 children living in the UK were observed using the Leuven Scale in the Effective Early Learning project (OECD, 2004, p.6). The Leuven Scale being used on such large scale projects further implies it’s success as a research tool, and since it’s first development in the 1980’s, it has “*gained increasing purchase*” (MacRae, 2020, p.234), particularly by UK researchers studying and observing pupils in the foundation phase. However, to some other researchers, the Leuven Scale is viewed as limited, for reasons such as it is only “*designed for early-years education and need[s] to be modified to apply to other age groups*” (Goldspink, 2013, p.294), it can only be used in observations, and whilst it does measure a child’s involvement, it can’t be used to measure other aspects, such as cognitive ability, or wellbeing, unless another scale, such as the Leuven Scale for Wellbeing is used, making it difficult to measure more than one aspect of learning during a single observation.

Overall, it can be argued that whilst the Leuven Scale has proven immensely useful to a number of researchers, like almost all research tools, there are areas of potential development which could improve certain factors. Following on from this, whilst planning my research, I decided to adapt the Leuven Scale for Involvement slightly (see Appendix 1), to make it more suited to how individually engaged the children I was observing were, rather than how involved they were in the given tasks.

Whilst my research took form as a simple observation, ethical considerations had to be put in place. This was a particularly important step in planning my research for a number of reasons, as I was observing and working with children in the foundation phase. One ethical issue that can apply to observations is that “*if participants are unaware of being observed, issues of invasion of privacy and informed consent arise*” (Lawton & Willard, 2019, p.263). Another ethical issue that can occur, especially when working with children, is the fact that due to their age, children are unable to give informed consent, and can only give assent if they are old enough to understand the general research, the risks and possible benefits, and what is expected from them as subjects. The British Educational Research Association (BERA) Ethical Guidelines for Educational Research state that to best address this issue “*researchers should fully explore ways in which they can be supported to participate with assent in the research. In such circumstances, researchers should also seek the collaboration and approval of those responsible for such participants*” (BERA, 2018, p.15). In order to address these issues, and abide by these ethical guidelines, before conducting research, I ensured that as well as gaining assent from the pupils involved in my research, the parents/guardians of School X had been contacted with information on my observation in their child(ren)’s class, and had therefore been able to give informed consent on behalf of their child(ren). One other important ethical consideration when conducting research is maintaining confidentiality and anonymity. By keeping participants’ information confidential and anonymous, we are ensuring that we keep up with our responsibility as researchers to protect our participants from any potential harm. In order to ensure that I was keeping the

pupils that I was observing safe, I made sure to keep all information I was given about any of the pupils entirely confidential, and made sure to anonymise my data at the source, by not recording or including any direct identifiers or indirect identifiers (except the participant's general age range) in any of my data collection.

Once all of my data had been collected, I was able to come up with the findings for my observation. My observation took place within a Foundation Phase classroom, and I observed a small group of five pupils in a set of two observations by recording engagement levels on a table and taking notes (see Appendix 2, 3 & 4). The first observation looked at the pupils' engagement levels when completing independent tasks. These independent tasks, which involved activities such as using blocks to recreate a picture, using sticks, string and elastic bands to create paintbrushes, and using plastic pins to look at pattern and reflection, were set up in a number of spaces around the classroom. The pupils were free to move around the classroom to decide by themselves which of the tasks they wanted to complete. The second observation looked at pupil engagement when completing teacher-led tasks, in this case, continuing an introduction to online safety. The pupils were sat on the carpet in front of the interactive whiteboard and teacher and were asked to participate by writing answers to given questions on mini-whiteboards. My results showed that on the day of observation, during independent tasks, pupils had an engagement rate of 82% whereas during teacher-led tasks, pupils had a lower engagement rate of 58%. In another study of the same nature, similar results were found, with their research finding that "*children who were given free choice of what toy to play with engaged with the toy on average for six minutes and children who were presented with a toy to engage in by an adult engaged with the toy on average for two and a half minutes*" (Kokoros, 2019). However, in spite of these results, I feel that there were a number of limitations within my research, as well as other factors which may have influenced the percentage difference in the pupil's engagement rates during the two different tasks.

Overall, my research concluded that foundation phase pupils showed significantly more engagement whilst participating in independent tasks in comparison to teacher-led tasks. Whilst my research contained a number of strengths, for example, sticking to ethical research guidelines, having a prepared scale and using the same pupils and how often behaviour was recorded within the observation, there were a number of limitations within my research, which I touched on in my literature review personal reflection (see Appendix 5). These limitations included potential observer bias or misinterpreting behaviour, and whilst it could be argued that a way to counteract these limitations may be to use another type of observation, some may argue that whilst "*observation research is useful [and] feasible for practitioners*" (Urquhart, 2015) in order for it to be truly useful it "*need[s] to be accompanied by other research methods*" (Urquhart, 2015). An example of using other research methods alongside this observation could be to conduct interviews or questionnaires after each half of the observation to ask the children which task they felt they were the most engaged in. This would then allow for pupil's observed behaviour to be compared alongside their interview/questionnaire answers and could help to pick up on any misinterpreted behaviour, allowing for more accurate conclusions to be drawn. However, due to the nature of observational research, this wouldn't address the issue of observer bias, and therefore another solution, such as having more than one observer in the classroom also recording pupil's engagement would help to avoid this bias due to the same behaviour being observed by different people, so any anomalies could be picked up on in order to get the most accurate results possible. Other limitations include not having the information in order to take

into account any pupils with external factors that may impact their ability to concentrate, for example, ALN pupils as well as using a scale that in some cases, may be viewed as a limited way to record behaviour. However, despite the limitations of my research and limitations in conducting observational research, my results have impacted on my professional learning and will have an impact on my professional practice, as I will take into account the different environments pupils are able to engage in the best and use this to create a learning environment in which all pupils are able to fully engage with tasks on a daily basis.

Appendix

1: The scale I used for my observation (based on the Leuven Scale for Involvement)

Engagement Scale

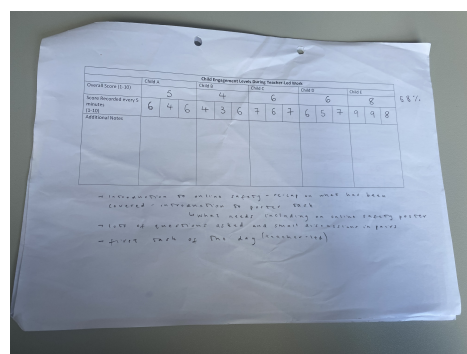
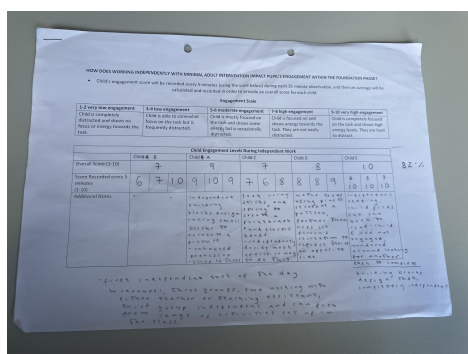
1-2 very low engagement	3-4 low engagement	5-6 moderate engagement	7-8 high engagement	9-10 very high engagement
Child is completely distracted and shows no focus or energy towards the task.	Child is able to somewhat focus on the task but is frequently distracted.	Child is mostly focused on the task and shows some energy but is occasionally distracted.	Child is focused on and shows energy towards the task. They are not easily distracted.	Child is completely focused on the task and shows high energy levels. They are hard to distract.

2: An empty version of the table I used to record my observations.

Child Engagement Levels During Independent Work													
	Child A			Child B			Child C			Child D			Child E
Overall Score (1-10)													
Score Recorded every 5 minutes (1-10)													
Additional Notes													

Child Engagement Levels During Teacher-Led Work													
	Child A			Child B			Child C			Child D			Child E
Overall Score (1-10)													
Score Recorded every 5 minutes (1-10)													
Additional Notes													

3: The printed table I used to record my observations.



4: My recorded observations typed up on the final table

Child Engagement Levels During Independent Work																		
	Child A			Child B			Child C			Child D			Child E					
Overall Score (1-10)	7			9			7			8			10					
Score Recorded every 5 minutes (1-10)	6	7	10	9	10	9	7	6	8	8	8	9	10	10	10			
Additional Notes	Independent building blocks design - using small blocks to recreate a picture -enhanced provision, group of three.			"			"			Task using sticks, string, and elastic bands to create a paintbrush and independently decide what will make the most effective paintbrush.			Maths task- using plastic pins to recreate a pattern, partner then uses first person's recreation and reflects this on the opposite side.			Building blocks design task, done completely independently without partner or group.		
- First independent task of the day - Carousel, three groups, two working with either teacher or teaching assistant, third group has independent 'challenge time' and can pick from a range of activities set up around the classroom.																		



Child Engagement Levels During Teacher-Led Work												
	Child A			Child B			Child C			Child D		
Overall Score (1-10)	5			4			6			6		
Score Recorded every 5 minutes (1-10)	6	4	6	4	3	6	7	6	7	6	5	7
Additional Notes	- Introduction to online safety- re-cap on what has been covered- introduction to poster task- what needs including on an online safety poster? - Lots of questions asked and small discussions in pairs - First task of the day (teacher led)											

5: My Personal Reflection on my research

Professional Reflection

1. Describe ONE of the observations you carried out. What did you learn from it?

In my second set of observations, I looked at pupil engagement during teacher led tasks and independent tasks. I selected five of the pupils to observe during the teacher-led tasks, where I recorded their engagement on a scale of 1-10 based on the Leuven Scale (1 representing no engagement, and 10 representing maximum engagement). I then observed the same five pupils during independent tasks and recorded their engagement using the same scale. Through conducting the observation, I learnt that pupils showed the most engagement in tasks that they had the most individual interest in, regardless of whether the tasks were teacher-led or independent. However, I also learnt that through limited observation of pupils alone, where the observer hasn't previously met the pupils, has no background knowledge of factors that could have an impact on particular pupils engagement (ALN, personal life outside of school, etc) or is able to observe identical tasks being teacher led and independent, it is difficult to ensure both external and internal factors are controlled, and therefore the results of the observation may not be entirely accurate, or as accurate as they could be.

2. What were the challenges and opportunities of being a non-participant observer in the classroom?

Challenges of being a non-participant observer included not being able to build up a relationship with the pupils, which is an important factor, especially when observing something like engagement, as all pupils engage with lessons differently. It was also likely that I could have misinterpreted some of the engagement due to observer bias, for example, a child

looking down instead of at the teacher may not have been distracted, and may well have been carefully listening to what the teacher was saying. However, opportunities of being a non-participant observer in the classroom included being able to observe from a distance, meaning that the pupils are unlikely to have realised they were being observed, so their behaviour wouldn't have changed, making results more accurate and able to be generalised to other situations. I was also able to focus entirely on observing, and record pupil's engagement during the activity, which again is more likely to give accurate results.

3. In your experience, what were the benefits and limitations of the Leuven Scale as a research tool?

Benefits of the Leuven Scale during my observation included having a clear criteria as to how engagement should be recorded, and what factors should influence the engagement scores given. It also provided numerical data, which is easily comparable and allowed me to work out overall engagement scores for individual pupils, as well as overall engagement scores for both tasks. It also means my observation could be repeated or replicated in another classroom. Limitations included the chances of observer bias being high, due to the scale being used in an observation, and the Leuven Scale also doesn't take most ALN pupils into account.

4. What were the main points of learning for you in terms of being a researcher in the classroom?

My main points of learning in terms of me being a researcher in the classroom would be taking sample size and length of observation into account. I used five pupils during each 15 minute observation, and whilst this did give me a bigger sample size and therefore more data, it was very difficult to keep track of each child, and is likely that I may have missed some important details whilst trying to observe all five pupils at once meaning my results may not have been as accurate as they could have been.

5. What would you do differently if you were to conduct this research again? Why?

If I were to conduct this observation again, I would ensure that as many internal, external and situational factors were as controlled as possible and carry out more observations with a shorter time and with a number of different smaller sample sizes, and have these spaced out over a number of days. This would give me much more data and a bigger sample size overall and ensure that results and conclusions could be as accurate as possible, any anomalies could be discarded due to the larger data samples and any factors which may have a potential impact on these results would be minimised.

6. Discuss any other methods of research you could use in the classroom to improve your practice. What are the positives and negatives?

Whilst observations are extremely helpful in observing people in their natural environment without it being likely to affect their behaviour, it is difficult to gain any truly accurate results due to very little control over many of the variables and the potential to misinterpret behaviour. Instead, other research methods, such as interviews or questionnaires could be used instead, or alongside an observation as they would allow for the pupil's to express how they feel about their own engagement, as well as have their engagement observed. This allows for the two types of data to be compared and evaluated against one another, to hopefully gain a more accurate picture on each pupil's overall engagement, and therefore provide more reliable data and conclusions.

References

British Educational Research Association [BERA] (2018), *Ethical Guidelines for Educational Research*, 4th edn, London. Available at:

<https://www.bera.ac.uk/publication/ethical-guidelines-for-educational-research-2018>

Cotton, D, Stokes, A & Cotton, P (2010) "Using Observational Methods to Research the Student Experience", *Journal of Geography in Higher Education*, 34(3), pp.463-473.

Available at:

<https://www.tandfonline.com/doi/epdf/10.1080/03098265.2010.501541?needAccess=true&role=button>

Department for Children, Education, Lifelong Learning and Skills (DCELLS), (2008), *Observing Children*, Cardiff: Welsh Assembly Government. Available at:

<https://s3-eu-west-1.amazonaws.com/hwb-live-storage/a8/9c/a8/ee/f299432c801d025d875da415/observing-children.pdf>

Forman, G. and Hall, E. (2013) 'Wondering With Children: The Importance of Observation in Early Education', *LEARNing Landscapes*, 7(1), pp. 187-202. Available at:

<https://learninglandscapes.ca/index.php/learnland/article/view/Wondering-With-Children-The-Importance-of-Observation-in-Early-Education/637>

Goldspink, C. (2013), 'A conceptual model and set of instruments for measuring student engagement in learning', *Taylor & Francis Online*, 43(3), pp. 291-311. Available at:

<https://www.tandfonline.com/doi/full/10.1080/0305764X.2013.776513?scroll=top&needAccess=true&role=tab>

Kokoros, T. (2019), *What Impacts Young Children's Attention and Engagement In Early Childhood Education Settings?* Available at:

<https://www.earlychildhoodeducationandcare.com/bloggers/2019/1/1/what-impacts-young-childrens-attention-and-engagement-in-early-childhood-education-settings>

Laevers, F. (2011), *Experiential Education: Making Care and Education More Effective Through Well-Being and Involvement*, Montreal, Quebec: Centre of Excellence for Early Childhood Development. Available at:

http://expertisecentrum.cego.be/wp-content/uploads/2019/07/Laevers_2011_ChildEncyclopedia.pdf

Lawton, J & Willard, E. (2019), *AQA A-level Psychology Book 1*. London: Hodder Education

MacRae, L & Jones, L (2020), 'A philosophical reflection on the "Leuven Scale" and young children's expressions of involvement', *Taylor & Francis Online*, pp. 234-246. Available at:

<https://www.tandfonline.com/doi/epdf/10.1080/09518398.2020.1828650?needAccess=true&role=button>

OECD, Directorate for Education, (2004), *Starting Strong Curricula and Pedagogies in Early Childhood Education and Care FIVE CURRICULUM OUTLINES*. Available at:

http://expertisecentrum.cego.be/wp-content/uploads/2019/07/OECD_2004_FiveCurriculumOutlines.pdf

Urquhart, C. (2015), 'Observation research techniques', *Journal of EAHIL*, 11(3), pp.29-31.

Available at: <https://eahil.eu/wp-content/uploads/2015/09/29-31-Urquhart.pdf>