

Targets from last module feedback	How have you worked on this?	An example can be found on...
Read widely to deepen knowledge and understanding of topic in question and support your points.	I have worked on this by reading and using a range of different types of academic and professional literature on this topic to support points made. I have used aspects of the given reading list as well as explored and gathered my own reading materials.	This can be found throughout this assignment piece.
Continue to further develop a supported critical approach throughout, offering opposing views whenever possible.	I have worked on this by providing the opposing view on elements whenever possible to support the use of a critical voice.	This can be found more so within the literature review and methodology section.

ECAD5010 – C: Researching the Learning: what, how and why am I teaching?

Task Description – Design and conduct a small-scale research study, and critically evaluate the impact of chosen research tools and data/findings on the learner and on your professional practice.

Research Question: What are staff and Year 5 learners' perception on Questioning as an Assessment for Learning (AfL) tool, in particular the Think-Pair-Share strategy.

Word Count: 3,836

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Contents Page:

Introduction.....Page 3

Literature Review..... Page 3 & 4

Research Methodology.....Page 4, 5, 6

Research findings and discussion..... Page 6 & 7

Conclusion Page 7 & 8

Reference List..... Page 8 to 12

Introduction:

The aim and rationale of this study is to specifically examine and evaluate a particular strand of Assessment for Learning (AfL) within classroom practice from seeking perceptions of teachers and learners within a primary school. Research has become increasingly more common and important to what schools strive to do (Konstantinou, 2018). The Curriculum for Wales (CfW) clearly identifies research and assessment as important components. Assessment is seen as being an essential part of curriculum design (Welsh Government, 2020b) in supporting all learners to make appropriate progress. The study focuses upon examining a specific strand of AfL. The strand of AfL wished to enquire was constructed in the form of a research question titled: What are staff and Year 5 learners' perceptions on questioning as an Assessment for Learning (AfL) tool, in particular the 'Think-Pair-Share' (TPS) strategy. Welsh Government defines AfL as being the process of determining where learners are on the learning continuum, where they need to go and the best way to get them there (Welsh Government, 2010). AfL is core to the CfW within the key principles of assessment and is advocated within the pedagogical principles of good teaching and learning (Donaldson, 2015).

Prior to the study, it was hypothesised that questioning was often integrated and an important part of classroom practice as part of an AfL strategy, but the influence and types of questioning approaches can be overlooked resulting in some questioning in the classroom being less effective. This hypothesis stemmed from personal experiences; the purposes being to explore into whether this hypothesis is valid. As well as, acquiring the insights of staff perceptions on the use of questioning in particular the TPS method, this study also aims to explore learners' views to understand their perspectives on questioning and how it impacts them directly and the teaching and learning.

For this research study, I will be adopting the Mosaic Approach, combining a mixed methods approach to gathering data through using interviews and online questionnaires as research tools to explore the perceptions of teachers and learners.

Literature Review:

As previously stated, assessment is an intrinsic part of curriculum design within education. According to Great School Partnership (2015) the term assessment refers to the broad range of techniques and tools that educators employ to assess, measure and record pupils' academic readiness, learning progress, skill development or educational requirements. The primary purpose is to enable each learner to make progress at an appropriate pace and be appropriately supported and challenged (Welsh Government, 2020b). It is said that assessment can have considerable influence upon pupils learning (Crisp, 2012; McDowell et al, 2011) and may also enhance it (Sambell, McDowell and Montgomery, 2013). Within education, typically, there are two main types of assessment, summative and formative. Summative can also be termed assessment of learning (AoL). Summative assessment measures pupils learning and understanding at that current moment such as start or end of a term, year, or stage of learning, ensuring they have fulfilled the required standards (OCED, 2008). Furthermore, the data gathered from these types of assessments provide schools and teachers with specific indication of pupils' performances which can be used to inform learners, parents/carers, and other appropriate stakeholders such as governors (Burnham, 2018). Also, they can compare standards with other schools both locally and nationally or track their progress against standardised scoring. GCSEs and National Tests for Wales are a prime example of summative assessments. That said, summative assessment usually focuses on the output, by which is said to be too late to address and recover any difficulties learners may have experienced or make any significant improvements (Clarke, 2008; Reddy, 2016; Aubrey and Riley, 2019). Therefore, this could appear not be a true reflection when learning is considered.

The second type of assessment is formative synonymously termed as Assessment for Learning (AfL). The work of Professor Paul Black and Dylan Wiliam (1989b) in their publication of literature titled: *"Inside the Black Box"* acted as a core vehicle in populating and prioritising AfL in education and bringing it to the forefront of improving learning and raising all learners level of achievement (Bartlett, 2015; Black and Wiliam 1998a, 1998b). It enables educators to continually assess pupils learning, and progress to

determine learning needs and adapt and enhance their teaching and learning strategies accordingly. Formative is more student-centric, through learners being more actively involved in the learning and assessment process and taking more responsibility for their own learning (Bates, 2019). As a result, this is said to enable learners to develop their skills and knowledge to become lifelong self-directed learners (Cowie and Bell, 1999; McDowell et al, 2011). Thus, can holistically inform “ambitious, capable learners ready to learn throughout their lives” (Welsh Government, 2020a p.1). Consequently, perhaps one of the challenges to AfL between theoretically and practically is the time it can take to develop and embed effectively in practice, meaning perhaps less time for teaching and covering curriculum content, particularly with curriculum demands (Carless, 2005).

AfL consist of four main strands. These are; sharing criteria with learners, quality of questioning and talk, self and peer assessment and quality of feedback (Black and Wiliam, 1998b; Clarke 2005). For this study the primary focus is questioning.

Questioning is as an essential technique within practice and is used to evaluate the specific learning goals (Black and Wiliam, 2009; Jiang, 2014). Questioning is inseparably related to AfL which, therefore, could be considered to have a primary aim of assisting learning. Educators asking frequent and quality questions are key to learners learning process. Rosenshine (2010) argues that questions can help pupils practise new materials and make connections between current and previous learning; thereby taking a constructivist view to education. It is said time given for pupils to answer questions may be too short, with the average being less than a second (Rowe, 1986) and the quality of questions formulated by teachers lack challenge (Flórez and Sammons, 2013). It is vital to ask questions that will assist productive conversations; open-ended, high-quality questions will encourage better quality discussions (Welsh Government 2010). When pupils respond to questions that are productive, they are encouraged to evaluate, create, and analyse when they answer (Tienken, Goldberg and DiRocco, 2009). Thus, enables pupils to develop and show their higher-order thinking skills, such as those presented in Blooms Taxonomy (Moseley, 2005). It is recommended that the questions require structure to foster deeper levels of thinking and conversation whilst also ensuring that the teacher responses encourage student engagement and participation to maximise learning opportunities (Clarke, 2008)

The utilisation of different teaching techniques may also encourage boarder engagement of pupils; strategies such as increased thinking time (Ingram and Elliot, 2015). However, it is vital teachers establish a safe classroom climate where pupils feel comfortable to pose questions, explore ideas, explore their misconceptions, and collaborate in classroom dialogue without the fear of giving the incorrect answer, criticism, and humiliation. Therefore, this could improve students learning by providing opportunities for misconceptions to be classified and discussed so that everyone can learn collaboratively (Flórez and Sammons, 2013). TPS is a questioning pedagogical method which enables learners to be active in their learning and encourages cooperation between all to answering questions. The use of TPS is shown to further improve student performance (Kaddoura, 2013). However, TPS requires careful management to ensure pupils do not become off task and lose motivation (Clarke, 2008).

Research Methodology:

As mentioned, the focus of my study is to examine staff and learners’ perception on questioning as an AfL, in particular the TPS method. In considering this, a mixed method approach was adopted using interviews and online questionnaires. This adheres to elements of the Mosaic Approach which is a holistic approach which explores and acknowledges the importance of the different perspectives of families, practitioners, and the children (Clarke and Moss, 2005). This approach utilises a combination of multiple research tools such as observation, interviews, and participatory tools for children such as cameras. Therefore, actively enabling the collection of data that reflects their perspectives. Of course, one of the main positives to the Mosaic Approach is that it explores and values the voice of children which is embedded into the United Nations of the Rights of the Child (UNCRC) under article 12 which states that “Every child has the right to express their views, feelings and wishes in all matters affecting them”

(UNICEF, 1989 p.1). On the other hand, it could be argued that the Mosaic Approach could be time-consuming to analyse the data from range of different perspectives.

The mixed method approach in this study, enables a combination of qualitative and quantitative data to be collected. Therefore, this will enable a more holistic picture of the study (Punch, 2005). This is said to be useful in enhancing the strength and validity of research findings (Coe et al, 2012). That said, according to Grigg (cited in Welsh Government, 2015) due to using only two research tools in this study does not execute full triangulation of data so could limit the credibility of the study. Therefore, next time I would perhaps conduct lesson observations to enable full triangulation and to gain a greater understanding of questioning in the classroom with reference to TPS. Quantitative data is usually presented in forms of statistics where qualitative data typically presented in words and more concerned with exploring individuals' perspectives (Sharp, 2012; Bell, 2018). Each approach is particularly suitable for different contexts and has both strengths and weaknesses. It is argued that qualitative and quantitative data should not be considered as being in opposition to one another but rather as complementary or might be indicative at different stages of the research (Aubrey et al, 2000; Clough and Nutbrown 2012). Therefore, this could imply that a combination of both is favoured.

An interview is a discussion that takes place between researcher and interviewees with the researcher typically asking questions on a certain topic (Lambert, 2012) There are three different styles of interviews: structured, unstructured, and semi-structured. This study implemented a semi-structured interview containing some closed questions but more open questions to primarily gather qualitative data. The nature of this interview allowed some degree of structure through standardised set of questions set out to explore and achieve but also with scope of flexibility to ask further questions to probe for greater detail if desired (Mukherji and Albon, 2018). Due to this degree of flexibility, this enables the researcher to be in control of the situation and questions to be adapted accordingly if required for example to suit the needs and level of understanding of the interviewees (Gilbert, 2008). This could be viewed as a positive but also a negative due to perhaps restricting freedom of interviewees to express their views fully. Furthermore, interviews enabling qualitative data has strengths, however the validity of this information could be an issue as questions could be misunderstood or misinterpreted (Cohen, Manion and Morrison, 2018).

Questionnaires are "written form of questions" which proposes both 'open and closed questions' based on a particular topic (Thomas, 2017 p.217). Depending on the style of questions proposed it can enable presentation of both qualitative and quantitative data. The benefit of a questionnaire is that they are often clear and simple to complete (Mukherji and Albon, 2018). That said, sometimes response rates to questionnaires can be low (Lambert, 2012; Welsh Government 2015). This was evident in this study, as questionnaire responses were low, therefore only collected a small sample of data which could be seen as a limitation due to lacking a stronger degree of creditability. Next time to improve this I would perhaps interview teaching staff also to receive instant feedback and generate more data.

This research study took place in a local primary school with approximately 582 pupils. Prior to research day, questionnaires and interviews were prepared and constructed with great consideration of the types and formats of the questions to ensure meaningful responses but also appropriate collection of quantitative data and narrative style responses (Qualitative) to gather a better understanding. Following this, care was taken to avoid including questions that might be constructed as leading the respondents to a specific response (Kumar, 2011). Online questionnaires were created on Microsoft forms and sent out prior to all KS2 teaching staff to gather their views and knowledge on this study (See appendix 5). In addition, semi-structured interviews were executed with groups of children whereby pupils were invited to respond to key questions relating to this study (See appendix 3). The purpose of interviews was to actively explore and enable the collection of data that represents the voice of the children. Adhering to aspects of the Mosaic Approach and particularly Article 12 of the UNCRC, as previously stated. The qualitative data collected from the interview has been transcript and analysed by coding into key themes (See appendix 4). Whereby quantitative and qualitative data from the questionnaire will be presented and analysed into graphs and tables (See appendix 6)

Ethical considerations are paramount. Research ethics is concerned with respecting participants and avoiding causing any type of harm, distress, or negative feelings to participants throughout (Alderson and Morrow, 2011; Oliver 2010). Throughout this study the British Educational Research Association (BERA) and other ethical guidelines were adhered to. Prior to the research day, an ethics form was completed to consider and mitigate all the ethical implications when doing research particularly within a school (See appendix 1) In accordance with BERA, it is important to obtain voluntary consent prior to conducting research however, children under the age of eighteen cannot give their consent and is often gathered by parent/careers. For this study the focus was on trailing research tools, therefore a general consent form was created and provided (See appendix 2) to the school highlighting the purpose of this study. This enabled the school to provide voluntary consent to undertake and be involved in this study on behalf of the learners. Equally, active assent was obtained before and during the interviews with pupils. It was made apparent to all participants that they did not have to answer any questions they did not wish and had the right to withdraw at any time without having to explain themselves or any consequences (BERA, 2018). The General Data Protection Act 2018 and BERA (2018) highlights the importance of confidentiality and anonymity within research. In this study all participants and the school itself were kept anonymous, and all collected data was only used for the purpose of the study and kept in a secure password protected file to ensure the management and privacy of the data received.

Results and Discussion:

From obtained evidence, from both questionnaires and interviews it appears questioning as part of AFL is highly integrated into classroom practices which has an influence on teaching and learning. Information collected on the interviews, highlight the strong use of questioning specifically in math's, literacy and when new topics are introduced however a mixed view on the impact on learning was reflected. Some participants viewing questioning as helpful to their learning due to gathering a better understanding while others viewing questioning at times being challenging and leaving confusion; thereby future recommendations were made by pupils for their teacher to provide explanations of some questions at time, to reduce this confusion. This contradicts Flórez and Sammons (2013) findings that questions constructed by teachers lack challenge for learners. As a result, this suggests there is conflicting views between feelings of learners and literature on the degree of challenge on teachers questioning in practice.

Responses from questionnaires to open questions, evidenced a range of questioning approaches that are preferably and most used in practice including open and closed styled questions, Blooms Taxonomy, Q Matrix, Think-pair-share (See appendix 6). However, responses from interviews highlighted awareness to only the use of lollipop sticks to ask questions to different individuals in the class when similar individuals are always responding. The use of this particular questioning technique had some strong feelings by pupils for instance one stating that "they really do not like those lollipop-sticks as they don't like the feeling that you do not know whose name is going to be picked out" (See appendix 4). Therefore, this could imply that lollipop sticks are not favorable questioning tool to all learners' preferences and needs. There were similarly strong responses through the questionnaires on the use of open-ended questions and 'big questions' for learners to provide more considered and deeper answers to show more enhanced level of understanding of what they are learning with justification and reasoning. In addition, one respondent from the questionnaire expressed that questions that are open in nature can be an effective way of finding out what learners actually know and understand. This is in full support of Welsh Government (2010) that presents the importance of open and high-quality questions to encourage better quality discussions.

Another common theme was the concept of thinking time; respondents from the questionnaires expressed a high preference for giving learners thinking time (Refer to Q9 appendix 6). Following Ingram and Elliot (2015) findings relating to increasing thinking time does appear according to all questionnaire respondents to have a significant impact on the quality of learner's responses. That said, it is not entirely clear from these findings of the impact of increased thinking time on other aspects of the classroom such

as behaviour. Interestingly, the thinking time given from respondents on the questionnaire is comparatively long compared to the average being less than a second, as stated by Rowe (1968) and suggested times of '5 seconds' (Clarke, 2005; Welsh Government 2010). The use of thinking time was also evident in the responses of the interviews, but slightly conflicted that sometimes they had more or less thinking time in particular lessons and depending on the style of questions. It appears that the use of thinking time was felt to be beneficial to pupils although the idea of more thinking time was favoured which some pupils highlighted that this could impact their contribution to answering questions. Interestingly, one respondent from the questionnaire points out that they try to remember to give thinking time as they are conscious, they do not always fulfil it. Therefore, this could imply some teachers theoretical believe they give appropriate amount of thinking time but practically this time could lack, due to perhaps time constraints or under pressure to finish curriculum content, something considered by Smith (2014)

From the interview responses, some liked to answer questions due to enjoying school or particular subjects. That said, some noted questioning preference for example themselves opting to answer rather than being picked, while some do not like answering questions due to them getting nervous and the fear of getting it wrong. This could suggest a safe and comfortable classroom climate has not been fully created, where all pupils feel comfortable to contribute to discussions and answer questions without the fear of getting it wrong and any humiliation.

In response to questions relating to TPS, evidence from questionnaire respondents displayed that this is a popular technique in practice with 100% of respondents using it quite often and being seen as a very and somewhat effective as an AFL questioning tool. However, interestingly it was made clear from pupils that they were not aware of TPS and did not do this in class. For this reason, some initial questions in the interview were not asked but subsequent questions replaced (See appendix 4). Responses from the interview, indicated that all participants would like to try TPS sometime and shared views on how they think would be helpful to their learning. Whilst there were benefits highlighted to the TPS approach from questionnaires but when asked also about potential drawbacks of the technique it highlighted that some children can dominant others due to being perhaps more confident or knowledgeable as well as some children may allow others to do all the work. Interestingly, one respondent expressed that there is no potential drawback to using TPS. Therefore, this could imply that it depends on how it has been integrated into the class or the nature of the class. As noted by Clarke (2008) TPS requires careful management to ensure pupils do not become off-task, however this was not noted by respondents from the questionnaires. Responses drawn from the questionnaires identified allowing learners sometimes to choose their own partners during TPS however 75% of respondents highlighted that when they select pairing for TPS, then mixed ability pairing is deliberately ensured. As a result, this could be evidence of Vygotsky's theory relating to the 'More knowledgeable other' concept being used in practice (Pound, 2006). It is found by respondents from questionnaires that pupils are more inclined and confident to answer questions after TPS. Thereby could imply this technique is enhancing learners' social skills and confidence. As a result, this could appear as beneficial and influencing on student performance, echoing the views of Kaddoura (2013). That said, it was also noted other ways are used to encourage less talkative and confident pupils to participant in TPS activities including modelling, differentiating, and ensuring the culture of the classroom makes it easy for pupils to share and answer, something Flórez and Sammons (2013) highlighted as important in enhancing pupils learning opportunities.

Conclusion:

The essence of this study was to explore staff and Year 5 learners' perceptions of questioning as an AFL strategy for teaching and learning, specifically the TPS approach. It was hypothesised that questioning was a critical integrated part of classroom practice however, the influence and types of questioning can be overlooked resulting questioning at times being less effective. From conducting interviews, questionnaires and drawing from literature, it was apparent there were clear aspects of similarity but also areas of conflict or contradiction. From my collection of data, it has revealed that questioning is a critical integrated aspect of classroom practice however the influence it has on teaching and learning seems to be slightly conflicting between teachers and some learner views. Tienken, Goldberg and

DiRocco (2009) draws attention to questions being open in nature to encourage pupils to display those higher-order thinking skills. This was also identified by questionnaire respondents that open ended questions were mostly preferred and used in practice.

On reflection of this study and previous teaching practice, I feel now more knowledgeable and confident in actively demonstrating and modelling this new information regarding assessment, AfL and questioning into future classroom practices. Additionally, from this study my research skills have developed in line with the research disposition. Therefore, I can transfer these research skills into other research studies and my future teaching practice to be research and evidence driven to make informed decisions and inform my pedagogies, something that is highly emphasised by Donaldson (2015). Also, my development of the Qualified Teaching Standards (QTS) (Welsh Government, 2017) specifically professional learning has been supported through exploring and developing my research abilities, the use of research tools along with professional knowledge on AfL and more so on questioning as a strand of AfL. From this, my professional practice is hoped to be enhanced in future classroom practices through being more critically informed and knowledgeable so that all learners are provided with effective and quality teaching and learning opportunities.

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