

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.

Word count - 3840

The aim of this assignment is to conduct a small-scale research study, and critically evaluate the impact certain research tools and data may have on learners and professional practise. The research focuses on the concept of Assessment for Learning (AfL). AfL is the general overarching term used to characterise the ongoing, two-way conversation between instructor and student. The learner's ability to have conversations about their learning is developed by the teacher while simultaneously receiving information about the learning that is taking place. Effective AfL implementation results in open and useful discussions between the teacher and the student. This procedure is crucial for the growth of independent, self-directed learners who can recognise their own learning needs and goals (Jennifer, 2013, p.93–96). Questioning, an element of AfL, was the main focus of my research study. The study looked, in detail, at staff and learners in Key stage two's (KS2) perceptions of questioning as a form of AfL. Teachers' questions are an essential component of a discussion that should be carefully considered when instructing or guiding learners. Open-ended questions are crucial because they allow the teacher to gauge the student's level of understanding (Jennifer, 2013, p.93–96). I decided on this focal point because AfL is at the core of the Curriculum for Wales. AfL plays a significant role in ensuring “each individual learner is supported and challenged accordingly” (Welsh Government. 2020). During my professional teaching experience (PTE) I observed a variety of AfL strategies, questioning being one of them. I observed questioning in the classroom but believe that it is not always well planned for and few opportunities to explore open ended questions were offered to the children. The “Mosaic approach”, a research approach by Alison Clark, was used to explore this topic. It is a multi-method approach in which the ‘voice of the child’ is the prime focus. It brings together a variety of techniques and resources that can be used to order to understand how children perceive and interact with their surroundings (Clark, A. 2005). The research tools used to carry out my study were interviews and questionnaires, and I will be justifying and evaluating these research tools as part of my research study.

AfL is a strategy that creates feedback that is then used to further improve student performance. Using AfL in the classroom promotes students' engagement and encourages them to become invested in their education. By doing this, pupils develop confidence and understanding on the standards and content they are required to study, this is known as formative assessment. The other type of assessment is referred to as summative assessment, this is used to evaluate students at the end of a unit.

AfL is widely regarded as one of the most effective methods for fostering learning and improving standards. When Paul Black and Dylan Wiliam released "Inside the Black Box" in 1998, presenting the argument for formative assessment, they ignited a discussion on AfL (Black, P., and William, D.1998, p.81-90.). Black and Wiliam agreed that classrooms are a complicated place and that little is known regarding what occurs inside. To obtain understanding of what was happening, they began to critically analyse the classroom like a "black box" (Deborah Bullock, 2017). They found that in terms of accomplishment and results, formative learners outperformed other pupils. The results of their investigation are outlined in Black and William's major study "Inside The Black Box" (Black, P., and William, D.1998, p.81-90). It was published in 1998 and concentrated on improving standards through classroom evaluation. They demonstrated, in doing so, that "formative assessment is at the heart of effective teaching; formative assessment has a strong positive effect on achievement; and improving formative assessment raises standards" (Deborah Bullock, 2017). AfL aims to "close the gap" between a learner's current level and where they want to be in their learning and achievement. D. Royce Sadler's ground-breaking 1989 paper, Formative assessment and the design of instructional systems, found that in order for learners to be successful they need to have an opportunity to close the gap between the level they are currently at and the level they want to achieve (Sadler, D.R,1989 p.119-144.). Sadler's work isn't current, but it is however extremely relevant as it aligns with theory of learning transfer. The term "transfer of learning" refers to the ability to apply skills and knowledge, that was previously learnt, to new situations in order to solve problems. Therefore, understanding similarities and connections between previous and current learning processes are important in ensuring pupil progress (Spielberger, C., 2004). After a learning experience, the best way to improve learning is to set up an action plan in order to achieve intended goals, and to carefully monitor progress through reflective learning sessions. According to Black and Wiliam, who supported the use of AfL, the technique should consists of four separate elements, quality questions/ quality of talk, use and quality of feedback, peer and self-assessment and sharing success criteria with leaners (Black, Wiliam 1998). Each element has been discovered to have a beneficial impact on learning in terms of their ability to encourage progress in teachers' classroom practice. In a recent Estyn report, that focused on AfL and thinking skills, it was found that the frequent use of a variety of AfL strategies improves engagement and confidence, pupils were "engaged in their learning and confident to try new things" (Estyn. 2018).

Although each aspect plays a crucial role in aiding a pupil's development, this assignment looks in depth at the effectiveness of questioning as a form of AfL. In the classroom, teachers use questions to encourage critical thinking and useful feedback. According to a

study on critical thinking, appropriate questions allow teachers and students to learn from one another (Wood, et al. 2001). Reviews of the research on the effectiveness of questioning show that it is a useful technique "to promote student interaction, thinking, and learning" (Wood, et al. 2001). In order for pupils to succeed, a teacher's questioning strategy should involve asking thought provoking questions, listening to student answers, redirecting responses, providing considerate feedback, and allowing for adequate time after asking a question. It is also important that teachers ask the appropriate type of question, depending on their circumstances. Divergent or open-ended questions are more likely to spark a conversation and promote an engaged and democratic classroom environment than convergent questions, which are used to collect low level cognitive information from students (Wood, et al. 2001). Teachers ask dozens, perhaps even hundreds, of questions every day. Over one million are asked in a professional lifetime (Wragg, et al. 2001). In the classroom, asking questions has been and still is a dominant method of instruction. Some argue that the most significant teaching strategy currently in use is questioning. The main benefit of questioning is that it encourages students to think critically (Filippone, 1998). One strategy used to encourage questioning in the classroom is think, pair, share (TPS) Lyman first proposed the cooperative learning strategy known as think-pair-share in 1981 (Lyman, F.T., 1981, p.113). It is a three-step process where students are given time to consider a question or problem and organize their thoughts. The next phase is for them to work in pairs and debate their solutions. According to Pressley (Pressley, M.1992, p.91-109.), this stage allows students a time to reflect and gives them an opportunity to determine what they know. According to Millis (Millis, B.J.,2012), students then present their ideas to the entire group in the final phase. It certainly differs from more conventional approaches, like lecturing since it promotes extensive interaction and encourages students to actively reflect on their own views.

The research study was completed by staff members and pupils in a school in West Wales. According to Estyn (2016), the school is made up of a large local authority council estate, a permanent gypsy traveller site, and private homes. There are 221 pupils registered at the school between the ages of three and eleven, including 33 who attend the nursery either full- or part-time (Estyn, 2016). 49% of pupils receive free school meals, which is significantly higher than Wales's average rate of 20% (Estyn. 2016).

Before carrying out my research project it was imperative that I considered any ethical issues that may arise and that the British Educational Research Association (BERA) guidelines were followed throughout. Initially an ethics form (see appendix a) and a consent form (see appendix d) were created and sent to the participants in order to protect the

dignity, rights and welfare of research participants (BERA 2018). It was made clear to both staff and students that they could withdraw from the study at any point. The staff were able to stop by simply exiting the questionnaire and the students were able to hold up a red card, which signified that they would no longer like to participate in their interview (BERA 2018). In relation to the Data Protection Act (2018) and BERA (2018), the confidentiality and anonymity of the participants was protected to ensure that the private information is not being accessed without participants' knowledge or permission.

In order to carry out my research project I used a pragmatic approach. This method suggests that by integrating various techniques such as interviews, observations or questionnaires, you are able to develop a deeper understanding of the phenomena under investigation. I also used the Mosaic approach, which brought together a variety of techniques in order to understand how children perceive and interact with their surroundings (Clark, A. 2005).

As previously stated, the techniques used to carry out this research study, were interviews and questionnaires. The interviews were semi structured, which combined a collection of open questions with the chance to look closer at certain themes or responses by asking follow up questions. The interviews were completed with year five children, ages 9-10, and used a total of three separate interviews in a focus group format. The first interview was with two children of a higher ability, the second interview was with two children of a middle ability and the last interview was with two children of a lower ability. I based each pairing on the pupil's language, literature and communication skills to ensure a cross section of responses. In order to collect sufficient evidence I decided to audio record the interviews because it meant that I could focus on listening, probing, following up and maintaining eye contact with the children I was interviewing. The data collected was qualitative data that I analysed by creating a transcript of each interview and highlighting key points and evidence that answered the questions. Qualitative data retrieves information that isn't numerical, for example, words and sounds (Mcleod. 2023). I decided to use interviewing as a research tool because the value of interviews has long been acknowledged in the field of social science research. Interviewing has therefore typically been considered a crucial component of the research methodology, as they have a tendency to offer "extensive accounts of people and events in their natural surroundings" (Weiss, 1995). In addition, Kvale (Kvale, S. 1996 p.2006.) makes a relevant argument that talking with people is one of the most effective ways to obtain and investigate different concepts. More specifically, because interviews are interactive, interviewers can insist on in-depth, meaningful replies and explore any potential new subjects. Interviewing is therefore expected to deepen comprehension of the subjects

being investigated because it is a less organised and more realistic mode of data collection (Kvale, S. 1996, p. 2006). Additionally, Dörnyei (Dörnyei, Z., 2007) claims that having an interviewer present can assure mutual understanding since the person conducting the interview can rephrase or clarify issues the interviewees were unable to understand. As a result, more suitable evidence will be gathered, leading to the production of more precise data. However, Walford argues that "interviews alone are an insufficient form of data to study social life" (Walford, G., 2007, p.145–157). This is because both the interviewer and the interviewee may possess inaccurate or incomplete knowledge on the topic being discussed. This allows us to consider whether it is suitable to use interviews as the sole method of gathering information (Potter, J, et al. 2005, p.281-307). Additionally, interviews have been critiqued (Robson, C., 2002) as being time-consuming in terms of data collection and analysis since they must be transcribed, categorised, and possibly translated, as was the case in the present study.

The other technique used in my research study was questionnaires. This involved sending questionnaires to seven members of staff that worked with in KS2, of which only three responded. The questionnaire aimed to gather information in order to answer the research question "what are staff and learners' perceptions and experiences of quality of questioning/talk as a form of Assessment for Learning (AfL)? ". The data collected was quantitative data that I analysed by creating graphs and tables and highlighting key points and evidence that answered the questions. Quantitative data takes numerical data and uses statistical analysis to analyse it. The goal is to provide factual, empirical data that can be quantified and stated numerically. It is often used to test theories, find trends, and make predictions (Mcleod. 2023). I decide to use questionnaires as a research tools because using a validated survey will save time and costs, enable the comparison of data from other investigations, and make it potentially easier to publish the results (Boynton, P.M. et al, 2004, p.1312–1315). Furthermore, a well-designed questionnaire can produce high-quality, useable data and good response rates, all of which encourages more open and honest responses, compared to interviews. Therefore, bias may be reduced (Williams, A., 2003, p.245-252). However, one major limitation of a questionnaire is that it could only be meaningful to those respondents with extensive education on the topic. Preoccupied people who have limited time in their day to complete the questionnaire are those who make up a significant fraction of the respondents. As a result, surveys are not always a suitable means on collecting data (Prasanna. 2023). Following on from this point, unlike an interview, questionnaires offer no personal interaction. Without someone present, those completing the questionnaire, have no one to clarify the technical phrases or queries they don't understand. In person interactions is suggested to be the best

way to achieve the questionnaire's aim and objectives. Without a true personal connection, it could prove difficult to persuade the responder to complete the questionnaire (Prasanna, 2023). The use of interviews and questionnaires enabled me to collect evidence to inform the research, but I believe that classroom observations would provide further, relevant evidence.

There are definite limitations in relation to my study on staff and learners' perceptions of questioning. For example, as previously stated, I sent questionnaires out to seven members of staff from KS2, but I only received three responses. This made analysing the data difficult because the lower the response rate the less accurate the data (West, R.P et al. 1986, p.267-286.). To avoid this from reoccurring I would send out the questionnaires a week in advance instead of two days, this would ensure that there was time for the staff member to complete it, allowing for more accurate data. The questionnaires were also sent out to seven staff members from the same school. This could lead to some bias because the questions could've been discussed between the members of staff, therefore decreasing the reliability of their answers. In relation to the interviews I carried out, only 6 pupils from year 5 participated. This small sample meant that I only gathered data from a small percentage of the age groups in question. Having two members of each group worked well as it meant I could discuss in detail with each member. This did however have its limitation because I found that each group had a more dominating member that spoke and interacted more with the interviewer. To prevent future limitations, a larger sample, from a variety of different year groups could be used, along with talking cards to ensure that every member of the group has equal opportunity to discuss their opinions.

In this section of the assignment I will be discussing the findings of my research study, which focused on staff and learners' perceptions of questioning as a form of AfL.

Question one and two of the questionnaire (see appendix b) demonstrated that the staff who participated in the questionnaire, see general AfL as a useful technique, with 100% stating that they are familiar with the strategy and use it often in the classroom. These indeed reinforces Dylan Wiliam and Paul Black's theory that formative learners exceled over other students in terms of accomplishment and outcomes (Black, P., and William, D., 1998). Suggesting that using successful AfL strategies in the classroom allows for a higher success rate than other methods such as formative assessment. Questions four and five (see appendix b) focused on gaining an understanding of the use of questioning in the classroom. With 100% of the participants stating that they are familiar with this strategy and find it effective in obtaining useful feedback from their pupils. This statistic emphasises Alexander Woods and Carol Anderson who researched, "effective teacher questioning skills",

philosophy that effective questioning in the classroom promotes “student interaction, thinking, and learning” (Wood, et al. 2001). Research conducted by Michele Filippone, on questioning at the Elementary Level suggest that the main benefit of questioning in the classroom is that it encourages students to think critically (Filippone, 1998). This point is further supported by an answer given to question six (see appendix b) of my questionnaire. The answer states that by using the appropriate level of questioning with a specific child you are able to encourage and stimulate critical thinking. This implies that by ensuring that teachers ask the correct questions, that are specific to the child’s ability, each child will have the opportunity to develop their critical thinking and language skills. The purpose of question nine (see appendix b) was to gauge an understanding as to which questioning methods they believe children engage with best, for example, lolly pop sticks and TPS. One participant stated that lolly pop sticks were most effective because pupils with additional learning needs (ALN) “can struggle with think, pair, share due to poor speech and language skills”. Although this point is valid, research done by educationalist Ahmed Raba suggests otherwise. In his study on the “Influence of Think-Pair-Share (TPS) on improving students’ oral communication skills” he concluded that the “Think-pair-strategy reinforces students’ communication skills” (Raba, A.A.A., 2017, p.12-23.). This suggest that although pupils with ALN may find it difficult to participate in this strategy, participating will have an overall benefit on their language, literature and communication skills.

The interviews with the pupils consisted of eleven questions (see appendix c), with the main focus being to gain an understanding of how AfL is used in their classroom. Questions one to three concentrated on gathering the children’s opinions on whether or not they are asked questions in class and if so how often? All six pupils who were interviewed, believed that questions were asked to the pupils in their class every lesson, suggesting that the use of questioning is consistent and often. This is supported by Professor Edward Conrad Wragg, who concluded that teachers ask dozens, perhaps even hundreds of questions every day. (Wragg, et al. 2001). Questions four, five and six were designed in order to understand how the pupils feel when they are being questioned or raising their hand to ask a question. 100% of the pupils admitted to not experiencing any feelings of anxiety or stress in their classroom. Although, the pupils who were interviewed, admitted to feeling comfortable in class, the fact that it was only the opinion of six students decreases its validity and therefore isn’t a reliable statistic to represent the feelings of all students. Questions seven, eight, nine and ten, gathered information on the different types of strategies used in the classroom and how useful the pupils believed them to be. The first strategy that was discussed was TPS. 0% of the pupils were familiar with this strategy with one of the pupil stating that she has “heard of it but I don’t know how to do it”. Considering the fact that TPS was first introduced by Lyman

in 1981, over thirty years ago, and is seen as an “effective technique”, it is surprising that the pupils were unaware of the method and its benefits (Lyman, F.T., 1981, p.113). They also referred to the ask a friend method used in their classroom. This method allowed them to ask their partner for help with a question if they were struggling to produce an answer. They praised this method and thought that it made answering questions in class “feel more comfortable” The final question of the interview asked the pupils about the thinking time they were given when asked a question. In a study on the concepts of “wait-time” and “think-time” it was found that the wait time given to pupils “rarely lasted more than 1.5 seconds”.

However ,it was discovered that, think time that lasts 3 seconds or more, has a variety of benefits for both pupils and educators (Stahl, R.J., 1994). The pupils’ responses to question were consistent with Stahl’s study discovery. The students believed that they did have enough time to answer questions in class and that they didn’t feel pressured to do so.

However, when answering this question two of the groups were hesitant with their answers, suggesting that they are unsure of the question, therefore decreasing the reliability of the answer.

The aim of this study was to investigate staff and pupils’ perceptions of questioning as a form of Assessment for Learning. Following the literature review, it was evident that questioning in the classroom was critical when it comes to building relationships between teacher and student. Questioning allows teachers and students to learn from one another and is a useful technique “to promote student interaction, thinking, and learning” (Wood, A.T, etal. 2001).

The questionnaires and interviews carried out further supported the effectiveness of questioning as a form of AfL. 100% of the staff that took part admitted to using and finding questioning effective. One staff member said that “It is an opportunity for individual assessment” (see appendix e), suggesting that by using questioning in the classroom teachers can assess and determine at which level a child is achieving and whether or not there is need for additional support. Researching an important pedagogical principle has positively impacted on my own professional practice. I am now aware of the impact of a variety of AFL strategies, in particularly, questioning. I understand how it needs to be effectively planned for, but also requires an element of flexibility in order to respond appropriately to individuals. In the future, I will be sure to carefully plan my questioning with guidance from Bloom’s Taxonomy, which is a multi-layered model that promotes learning by advancing through six levels of increasing complexity (Niall McNulty. 2021). Adopting this approach into my teaching, will ensure that I develop and scaffold questions to match the requirements of my students. Therefore, quality questioning will be implemented into my teaching practice along with the other strands AfL.

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