

Targedau / Targets	Sut rydych wedi gweithio ar hwn / How you have worked on this	Ceir enghraifft ar / An example can be found on
Targed/Target 1	To proofread assignments	I made sure I was aware of this on this assignment
Targed/Target 2	Have a wider range of reading	I have accessed a variety of literature I believe supports my points
Targed/Target 3	Use more paragraphs	I have made better use of using paragraphs to improve the flow of my assignment

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

Introduction

This study aims to explore the importance of research in education. The research study aims to focus on assessment for learning (AFL) moreover, narrowly focuses on year 3 and 4 learners' and key stage 2 staff from school A's perceptions of questioning in the classroom.

AFL has a formative, ongoing, and continuous approach to the evaluation or estimation of where a learner is at with their learning (Thomas and Lewis, 2016. Pp. 209). According to The Welsh Government (2013), the main aim of AFL is reached by empowering and supporting learners to achieve autonomy and independence. Unlike tradition, AFL is the broad and continuous observing, reflecting, and optimising good use of feedback for enhancement and acceleration of learning. Effective AFL practice may be underpinned by certain key four factors questioning, success criteria, self and peer assessment, and feedback. AFL requires sceptical practitioners for the quality of learning, and the ability to adapt and deepen teaching styles reacting taking place. AFL is for all age groups and areas of learning (AOLEs) across the curriculum underpinning effective practice of assessment. The writer may assume AFL is a research tool for teachers and learners which should be conducted in an appropriate way for successful outcomes.

For this study a mosaic approach to research has been used by sending a questionnaire to teaching staff in KS2 and conducting semi-structured interviews for three learners in year 3 and three learners in year 4 of a mixed ability. The research question being reviewed is 'What are staff and year 3 and 4 learners' perceptions on questioning?'.

Literature Review

According to Florez and Sammons (2013) supported by the Welsh Government (2013), AFL is defined by the Assessment Reform Group (ARG) as modifying teaching to meet the learning requirements of each specific learner; through activities that provide feedback by teachers assessing the pupils and the pupils assessing each other throughout said activities. According to Cambridge Assessment International Education (2011), each AFL factor may serve a valuable purpose to strengthen learning outcomes. AFL may have a positive impact on learners' confidence and independence, and change culture within the classroom. However, AFL's effectiveness may have misconceptions such as, a potential loss of class control through peers discussing feedback, assumption of exams accurate measure, teachers giving the feedback upon assessment only, and that learners work should always be graded. This challenges the Welsh government's (2013) desire to not adopt traditional testing methods. Moreover, according to Koo (2008) evidence may suggest a challenge of the questioning strategy that questions posed may be leading hence the response of the learner inaccurate. This meaning no or little effect on learners' cognitive development. This study focuses on the effectiveness of the questioning strand within AFL.

The purpose of the word questioning seems to be broad and deep when used in the classroom to succeed as an AFL strategy. According to Arnold (2010. P.p 68) the opportunity to ask questions can be powerful giving learners' ownership over their sole and collective learning, supported by the Welsh Government (2013) and Florez and Sammons (2013). According to Armsrtrong (2010), Blooms Taxonomy is categorised to remember, understand, apply, analyse, evaluate, and create. This questioning framework lays knowledge as the foundation of the catagorised cognitive processes. According to Forehand (2011), these six cognitive categories allow prior knowledge or ability to be used to excel to the next stage of more complex understanding, possibly more higher order thinking. Blooms Taxonomy provides a measure of a learners thinking, allowing teachers to measure their learner's present capability. According to Gray and Macblain (2015), supported by Bruner, a social constructivist emphasises the importance of social interaction. Bruner believed reflecting collectively on past experiences and experiences learners' believe may occur ahead, may result in enhanced problem solving and critical reflection skills. This may optimise the opportunity to move from lower order thinking onto higher-order thinking. Bruner thought this was key to developing language together with thinking. As another social constructivist, Vygotski may agree with Bruner that mixed ability collaboration may be best for the transfer of knowledge from a more knowledgeable other (MKO) to a less able learner

(Gray and Macblain, 2015. P.p 104). Although Piaget emphasises heavily on self-initiated discovery (Gray and Macblain, 2015. P.p 5) he seems to agree with Bruner and Vygotski's beliefs that discussion amongst learners who are the same ability would be the same as a learner solving problems alone (Gray and Macblain, 2015. P.p 104). This may suggest when a teacher poses a question and give the learners the opportunity to discuss their thoughts and ideas, language and vocabulary may be broadened in mixed ability groups. Smith and Conti (2016. P.p 32) express the importance of considering how learners are grouped in discussion to gain the most effective outcomes; They believe it is important to be flexible and adapt by observing how pairs and groups work together. Supported by Gray and Macblain (2015. P.p 105) who express there can be challenges when ownership is being taken over learning. A higher ability (HA) learner may make a lower ability (LA) learner feel redundant and incapable. This may mean it is relevant to consider how the collaborative groups are engaging with each other when questions are posed for discussion or task.

Like Vygotski and Bruner, Piaget believed the traditional drilling approach to teaching was less effective as opposed to self-discovery with the teacher as the facilitator (Gray and Macblain, 2015. P.p 83). This also suggests that teachers posing questions leads to more extended learning through curiosity and shared thinking with their peers. This was not supported by the behaviourist approach to teaching such as Skinner. According to Gray and Macblain (2015. P.p 4) Skinner opposed the views of constructivists as he believed learning and engagement was dependent on behaviour; supported by his theory of instrumental conditioning through punishment and reward.

Piaget believed cognitive development occurs in stages without an explanation why, not supported by Bruner and Vygotski who focused heavily on development occurring through social interaction, instruction, and language through thinking, not that developmental limits are subject to stages (Gray and Macblain, 2015. P.p 6). Thomas and Lewis (2016) agree that shared thinking extends learning through prior knowledge and agree with Piaget, Vygotski, and Bruner that good quality teachers engineer activities, possibly through questioning, to challenge learners thinking, and aid the ability to share with peers. Moreover, that teachers can use learners' interests and work with the learner to develop skills and ideas through contextual thinking. According to Gray and Macblain (2015. P.p 136 - 137) Mindfulness of how questions are posed to each specific learner is vital, that the use of language is modified to meet the needs of learners. A learner with additional learning needs (ALN) or a LA learner may require questions that enable lower order thinking such as, according to Cambridge Assessment International Education (2023) closed or hypothetical questions, that require one-word or imaginative answers. Opposed to the higher ability (HA) learner who may require open questions they can elaborate on independently through higher order

thinking. It may be possible to consider ALN and LA learners may benefit from the discussions created by open questions with HA learners when taking in their knowledge. They may even join in when they feel they can. When a question is posed for independent thinking, it is appropriate to consider learners feelings when the answers they provide are incorrect and said in front of their peers upon selection. According to Estyn (2021) and supported by Cambridge Assessment International Education (2023), learners must have time to think about their response. This suggests that teachers must carefully engineer their questions for the wellbeing and development of the learners.

Methodology

For this study a mosaic approach will be used to gain qualitative data. Qualitative data is gains feedback through the quality of response, hence for analysis (Albertson, 2021). According to Brown (2015) the mosaic approach is a combination of methods put together to listen to learners. Therefore, allowing collection of data at the ease of the learners. Brown (2015) believes a more honest response will be provided if the learners are comfortable whilst research is being conducted.

For the year 3 and year 4 learners, a semi structured interview will be individually conducted. Each interview will pose open and closed questions that research learners' perspective of questioning in the classroom. According to DeJonckheere and Vaughn (2019) a semi-structured interview enables the collection of data from individuals who have their own perceptions. Interviewing multiple individuals separately in this way will provide individual feedback regarding the questions posed enabling each learner's qualitative data to be compared and concluded. Closed and open questions may provide clear understanding of each learner's perspective of questioning as an AFL strategy (please see fig.). Posing closed and open-ended questions to ALN, LA, middle ability (MA), HA, and more able and talented (MAT) learners will show if ALN and LA learners are able access higher order thinking if they can give detail to their responses. Interviewing learners individually may allow independent responses and not be dominated by more able learners. This may be supported by Smith and Conti (2016. P.p 32) and Gray and Macblain (2015. P.p 105)

Another method being used, KS2 teaching staff will be sent an online questionnaire to complete (please see Fig.1). The questions posed for teachers also open ended for qualitative feedback. The quality of the data from the interviews may reveal how the learners feel when being asked questions, why they are asked questions, the if they feel it is important for the learning to be asked questions. Qualitative data may reveal how the teachers feel learners engage when questioned, importance of questioning for their teaching

needs, and limitations. Conclusions can be drawn from differences in perceptions between learners and teachers, teachers themselves, and learners themselves. Conclusions of the difference in data perceptions between different abilities can be drawn. A semi structured interview allows adaption of questions meeting learners needs. This may show if Gray and Macblain's (2015. P.p 136 - 137) beliefs of engineering questions to suit learners is evident. Moreover, if Cambridge Assessment International Education's (2023) beliefs of lower order questions being most suited to ALN and LA learners. Moreover, test Bruner's thoughts that reflective questioning allows transition from lower order to higher order thinking Gray and Macblain (2015. P.p135). Conducting a semi-structured interview may allow adaptations if the LA and ALN learners feel comfortable enough to elaborate. The teachers' questionnaires may uncover if they believe Skinner's behaviourist approach to development according to Gray and Macblain (2015. P.p 4) most effective.

Before attending School A, questionnaires will be sent to teaching staff in KS2 to complete online. During the research morning individual interviews on six mixed ability learners will take place. Pupil A a year 4 MAT learner, pupil B a year 3 LA learner, pupil C a year 3 MA learner, pupil D a year 3 HA learner, pupil E a year 4 MA learner, and pupil F a year 4 ALN learner. Data will be recorded confidentially. According to the BERA guidelines (2019) the privacy, confidentiality, and anonymity of the institution and participants are vital.

Researchers must express privacy rights to their participants. In this study the school or the participants are not named. An ethics form has been completed prior to attending the research day by the researcher for insurance reasons (see Fig.3). For interviews, the use of vocabulary and body language was considered to make the learners feel at ease supporting their wellbeing. According to the Education Workforce Council (EWC) (2022) it is the researcher responsibility to set an example and protect the rights and the wellbeing of learners. Moreover, the responsibility of researchers to protect the rights of the learner allowing the learner to have a say, according to Child Commissioner Wales (2019) article 12 of the United Nations Convention of the Rights of the Child (UNCRC).

A consent form will be signed by the headteacher of school A to consent to the interviews being conducted in the institution (see Fig.4). The learners will be made aware at the beginning of each interview of voluntary participation, and their right to withdraw throughout. They will be asked for verbal assent before. KS2 teachers will have an explanation of the aims of the questionnaire without bias. Question 1 will ask if they are happy to complete the questionnaire to consent.

Considering how the methodology may be strengthened, it is apparent with reflection that there are only two teachers in KS2 which may not provide much qualitative data to compare.

The interviews only include learners from year 3 and 4 excluding year 5 and 6. In reflection there may be more data generated if all teaching staff completed questionnaires and year 5 and 6 learners were interviewed. Comparisons would have been made between a year 3 and year 6 learners' data to test theory for this studies literature review.

Results and Discussion

For this study my findings from the results of the interviews and questionnaires were interesting uncovering key points that agree and disagree with literature. I decided to keep the interview questions the same for all learners. This may have gone against Gray and Macblain's (2015. P. 136 -137) beliefs on being mindful of how questions are posed to MAT, HA, MA, LA, and ALN learners due to the cognitive capability of the order of thinking, hence have an impact on the ability to elaborate. I wanted to test this aspect of literature. I considered the learners need for time to think (Estyn, 2021), and the importance of the learner's wellbeing when posing questions EWC (2022); making good use of body language and observing the ease of the learners.

The MAT, HA, and one of the middle ability (MA) learners were able to independently extend, and elaborate in detail when posed open questions, agreeing with Cambridge Assessment International Education (2023) believing this is done through higher order thinking. However, the ALN and LA learners were also able to extend and elaborate but had a completely different perception of the aims of questioning. The MAT, HA, and one MA seem to understand the reason for questioning is for AFL purposes and focus on formative assessment. Whereas, the other MA, ALN and LA focus more on their perception of questioning being used for summative assessment, support and guidance. Although, all learners ability to elaborate seems to oppose the views of Cambridge Assessment International Education (2023), and Gray and Macblain's (2015. P.p 136 – 137) beliefs of lower order thinking questions being posed to accommodate ALN and LA learners. In my opinion, it is relevant to remember my results are from questions for research to gain an insight into the learners' perception and personal beliefs on questioning in the classroom. They may have experienced this regularly and should have solid prior knowledge. This may be why all groups of abilities of learners were able to answer in detail but have different perceptions.

The questionnaires completed by the teachers showed teachers used questioning to check knowledge. Forehand (2011) believes this is used to excel from lower order thinking into thinking with more complexity giving teachers a measure of what the learners currently know; enabling them to modify their teaching for those learners accordingly (see Fig.1). This

may be supported by Pupil E (see Fig.2) whose perception of questioning is to see what learners already know and what they are interested in. The questionnaires completed by staff would suggest their questioning is not merely for access to understanding the prior knowledge of the learners; but for all learners to start from closed questions for lower order thinking to move onto open questions for higher order building the level of challenge hence, improve problem solving skills (see Fig.1). This was not the aim of the interviews which may be the reason for the results of elaboration used not supporting literature. This may add strength to the importance of being mindful of how questions are posed to learners (Gray and Macblain, 2015) when challenging capabilities and respecting the wellbeing of the learners EWC (2022). It is evident from all learners' interviews (see Fig.2) the feelings of the learners when being asked to answer posed questions is vital for consideration; all learners say they are happy to be chosen if they are confident, they know the answer. The MA and LA learners feel uncomfortable if they do not know the answer. The ALN learner does 'not like failing' (see Fig.2). This may suggest it is vital to pose questions that are not above the cognitive capability of the learners or if too complex to not choose a learner who a teacher is aware would not be capable to answer. However, questions that are beyond LA and ALN capability may be still of use in the classroom if they are not chosen to answer. It may be that by doing these challenges the MAT and HA learners and the MA, LA, and ALN learners can extend their ideas and knowledge hearing the answers. This may be agreed by the teachers the importance of each individual learner having the opportunity to extend their knowledge through challenging their specific learning level (see Fig.1).

It is evident one MA, LA, and ALN learner relies upon support from teachers through questioning and the ALN learner relying heavily on peer support when working and answering questions. Considering Skinner's punishment and reward theory (Gray and Macblain, 2015. P.p 4) questions if the questions posed by the teacher were too challenging for the ALN learner and they were not allowed to access help or, were allowed but still could not process the level of challenge; would this learner's behaviour remain calm? Would this be appropriate for the wellbeing of this learner? In my opinion Skinner's behaviourist approach to learning would not allow this learner to develop, but to have a negative impact on their confidence hence, a negative impact on further development. The teacher's questionnaire shows, the questioning methods are chosen according to the topic or capability of individual learners (see Fig.1). This may also link with the importance of learners having ownership of their knowledge. The MAT, and HA learners seem more confident to answer questions, possibly due to them being confident in their higher order thinking abilities. Although this seems to be important, it may be a challenge for the learners who do not have the ability to think so complexly. Considering Gray and Macblain's (2015.

P.p 105) views of ALN and LA learners feeling redundant. The teachers questionnaires show they are mindful of engineering their teaching and questions they pose to the differentiation of each learner (see Fig.1). This may suggest overconfident, more dominating learners may be better grouped together eliminating negative effects on the LA learner being able to have a say (Child Commissioner Wales 2019). Moreover, two LA learners may not benefit from each other's limited knowledge. This would support Piaget's and Vygotski's thoughts on two learners who have the same knowledge is like a learner working on their own (Gray and Macblain, 2015. P.p 104).

It seems to be vital teacher engineering their questions to suit all learners in their class for the challenge levels to be stretched according to capability and the wellbeing of the learners. Piaget and Vygotski's thoughts on asymmetrical relationships (Gray and Macblain, 2015. P.p 104) gives strength to Smith and Conti's (2016. P.p 32) belief for the need for thought into the most effective grouping of peers. Most learners said they were allowed to discuss questions or ask peers for help if selected allowing shared thinking about questions being posed. This may be to eliminate any uncomfortableness if the answer to the question is unknown, or to share ideas and extend knowledge (see Fig.2). Observing how peers are sharing their thinking may allow teachers to therefore modify their teaching or their grouping of peers giving more effective learning outcomes (Thomas and Lewis, 2016. Pp. 209).

Conclusion

The traditional ways of assessment through drilling and testing for data seems to be slowly disappearing (Gray and Macblain, 2015. P.p 83) (Welsh Government, 2013). Sharing ideas thinking is practiced as possibly a more effective AFL tool when being questioned; encourage lower order and higher order thinking, leading to extended knowledge. Carrying out qualitative research gains vital knowledge for not only me for this study, but also for the progression of the teachers and learners. Teachers can observe discussion amongst peers to identify prior knowledge or what they are currently learning. (Florez and Sammons, 2013) (Welsh Government, 2013). Questioning seems to have pros and cons (Cambridge Assessment International Education, 2023), but my findings from teacher and learners perceptions suggest benefits outweigh the challenges. Assumptions from my findings that some learners rely on peers to support them with answers through sharing what they think. Discussions with peers before being asked to answer a posed question may give a learner thinking time, likewise time if answering independently. Inspiration from peers may also be gained from their thinking and prior knowledge. Awareness of how peers are grouped for the wellbeing and ease of the learners is important as agreed by Smith and Conti (2016. P.p32), Gray and Macblain (2015. P.p 105 and 136-137, and Thomas and Lewis (2016). If being

challenged and stretched, the question must be appropriate to the individual learner to successfully extend their knowledge. It is also sensible to consider that peers are effective resources for each other for support as well as the teacher.

Making comparisons of the MAT and ALN perceptions of questioning. It is evident the perceptions are very different and both perceptions are vitally important to each specific learners needs. The MAT learner seems fully aware of questioning for formative assessment and the ALN learner believes questioning allows support and guidance for summative assessment of what they have learnt. Both vital perceptions to individual need with no challenges evident with the support given.

Teacher's perception focuses on building from closed to open questions to extend knowledge through higher order thinking, using an accurate challenge level question specific to each learner. Focused on a mixture of formative and summative assessment through questioning, encouraging critical thinking and problem solving. Selection for the wellbeing of learners vital. Teachers believe it would have detrimental impacts on the development of oracy skills without questioning. The contrast between MAT and ALN learners' data supports these views and results of interviews; AFL is the continuous, ongoing, monitoring of learners' knowledge to gauge where they are at (Thomas and Lewis, 2016. P.p209); empowering and supporting learners to achieve autonomy and independence (Welsh Government, 2013). Encompassing both the ALN and the MAT learners perceptions.

This study has shown that its research has not been too dissimilar to the aspect of questioning in the classroom. The ethical approaches and methods are the same methods. The data collected from this study has given evidence for and challenged key points raised. This tells me questioning is vital to gain key data for progression. This will help improve my practice through knowledge of the benefits of peer support and sharing views to extend knowledge through posing accurate level challenge questions.

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