How effective is peer assessment as a form of assessment for learning (AFL) within the Foundation Phase?

Gallwch ychwanegu'ch targedau o'ch aseiniad diwethaf gan ddefnyddio'r tabl isod. /
Please add your targets from the previous assignment using the table below.

	Targed/Target	Yr hyn yr wyf wedi'i wneud yn yr aseiniad hwn. What I have done in this assignment.
Targed/Target 1	Targets: 1. Continue to develop your critical thinking about your practice in order to identify what needs to change in order to make further progress.	I have read an extensive amount of literature to identify what changes could be made to my research to improve it. I have also used this literature to critically evaluate the benefits and limitations of peer assessment.
Targed/Target 2	2. Continue to develop your understanding of the pedagogical principles to improve teaching and learning.	I have read Donaldson (2015) review to compare with the evidence already gathered.
Targed/Target 3	3. When proofreading your work, check for accurate punctuation (in particular the possessive apostrophe) and accurate use of capital letters.	I have read over my work three times. I also had both parents read my work to check for any punctuation errors.

Introduction

The aim of this lesson study research is to validate the effectiveness of peer assessment has within the foundation phase. The teacher in my school used peer assessment as a form of assessment in every lesson; using different strategies. Within various lessons the teacher would implement these strategies, so students are engaged in conversation with a peer about the work they are completing. Being the observer I was sceptical of the effectiveness peer assessment had at this age; whether students appreciate their colleague helping them and the impact their friends' opinion has on their work or if they are too young to understand the impact. The Welsh Assembly Government (2010) suggest that peer-assessment is one style of Assessment for learning within the classroom across the curriculum [cited in Donaldson, 2015].

My mentor used different strategies to promote peer assessment in many different lessons. This was evident within the observation week. I discussed with my partner how effective he thinks peer assessment is with his Year 1 class. We both recognised that peer assessment is present within most of the lessons throughout the foundation phase timetable. This brought us to the research question 'How effective is Peer Assessment as a form of assessment for learning (AFL) in the Foundation Phase?'. Within my class this questions the effectiveness peer assessment has within the lesson and highlights the potential limitations this form of assessment has on the lesson.

Review of Literature

There are many different forms of assessment used within the school setting, both self assessment and peer assessment are applied throughout different lessons. Donaldson (2015) review of the curriculum suggests that formative assessment should be an indispensable component of teaching and not seen as an 'extra'. The professor recognises peer assessment as a key strategy where teachers are able to see a depth of understanding of the learning taking place, as long as the students have a success criteria to follow. Gibbs and Simpson (2004) [cited in Gielen et al, 2011] have recognised, valued and reflected upon the impact peer assessment has in a secondary school setting. The researchers found that a teacher's feedback is critical and therefore more effective to the student than that of a peer. They have suggested that peer assessment should only be considered effective if it used in a plenary, once they have completed a task. This would promote reflection on action instead of reflection in action. Maarof (2011) disagrees with this statement as the results this researcher gathered illustrates that students benefit from their peers' feedback because their explanations are pitched at the same level of development in contrast to a teachers explanation. This suggests

that a teacher's assessment of students is not as strong as those from their peers. The assumption taken from this contrast of opinion suggests it could be beneficial to have both forms of assessment within a lesson as the students can have a professional judgement as well as a judgement which is level with their growth. This helped me and my research partner with our research questions as there are differences of opinion on the effectiveness of peer assessment. Spiller (2012) recognises that peer assessment is a form of collaborative learning through interaction about what constitutes quality work. Hammond (2001) agrees promoting 'scaffolding' where work is reflected upon, critiqued and improved striving towards the result. Nuntrakune and Park (2011) back up the positive effects scaffolding has on students as it enhances co-operative learning which in turn boosts a students academic achievement, communication skills and problem solving. These researchers offer the question to see if scaffolding can be used within peer assessment to improve student work. Donaldson (2015) has a total of nine different forms of assessment strategies and these researchers have indicated both why peer assessment is considered one of them and why there are eight other strategies.

Topping (2009) recognises peer assessment as a strategy to critique three different variables within a piece of work: the level, value and quality (agreeing with Boud, 1995, cited in Spiller 2012). This strategy allows the students to then reflect on their own work and compare what they would need to do to improve it, promoting both peer and self-assessment (William 2018). However, this presumption of the students' ability to pass judgment on a piece of work is problematic as the students' may not recognise the success criteria conveying to the work set. Both Falchikov and Goldfinch (2000) and Cassidy (2006) dispute this as they looked into the benefits and limitations of peer assessment within higher education. Both researchers indicate that the main limitation to peer assessment is that the students' capabilities to assess peers' work could be misinterpreted. This limitation could arise as the student providing the advice could lack understanding and therefore present inaccurate results to their partners. It is critical that the individuals who are completing the peer assessment have a clear insight to make sure the strategy is used effectively. This reiterates Donaldson (2015) reform suggesting that students need to have a success criteria to guide their peer assessment. This helped us plan the research lessons as it is clear for us to have full control of the peer assessment taking place, instead of letting the students' voice a subjective opinion.

Brindley and Scoffield (1998) agree with the opinion of Topping (2009) as they too have recognised peer assessment as a variable which promotes personal motivation as a result of their involvement throughout the feedback process. Suggesting that the value of the feedback benefits both individuals. This researcher believes that individuals can essentially judge the quality of their peers who are at the same status in the classroom. Teachers often use peer

assessment so students can review the quality of their peers' work. However, Falchikov (2004) opposes this indicating that it is a subjective opinion from their peer's; causing a limitation on the effectiveness of peer assessment due to competition and rivalries between students within the classroom (Cited in Wood, 2009). Orsmond (2006) also suggests that a negative judgement on a piece of work could have a negative impact on the individual, one reason for this could be competition with their peers to get the best piece of work (agreeing with Falchikov 2004). It is clear to see from the literature gathered that the effectiveness of peer assessment is predominantly based on the students' interpretation of the feedback. Vygotskys Zone of Proximal Development promotes scaffolding within the learning environment. Feedback, questioning and instructing are three strategies implemented through Vygotskys theory (Sanders and Welk 2005). These three variables are all inclusive when peer assessment is questioned, opening the questions as to why peer assessment is not recognised as a positive and effective form of assessment within the foundation phase. Donaldson (2015) review of the curriculum suggests that collaboration allows the students to talk about their thought process, assessing that with peers allowing them to refine their learning skills. This promotes Donaldson (2015) vision of implementing scaffolding through peer assessment as a key assessment strategy in the future.

The literature gathered, broken down and critiqued indicates that there is a serious lack of evidence justifying the effectiveness of peer assessment within the foundation phase alone. The researchers have generalised peer assessment through all forms of education without a critical emphasis on the foundation phase. There is evidence which signifies scaffolding and collaborative learning is effective within the foundation phase however these strategies have not been peer based. This has justified questioning the effectiveness of peer assessment at this level.

Methodology

The method used throughout is lesson study research. This is a form of action research where the participants are in a comfortable environment putting practice into action within a lesson. Bradbury (2015) suggests that practitioners use action research to form a judgement on a particular enquiry. If effective, the judgement gathered is then used and applied in the future.

Lesson study research methodology originated in Japan. However, as this research was conducted in Japan; theory behind the method is essential to make sure it is successful in Wales. When results are shared and not kept as an individual experiences, practitioners who are looking into this topic are given a head start (Gergen, 1995 and Vygotsky 1978; cited in

Rock and Wilson, 2005). Rock and Wilson (2005) have identified eight steps to complete this methodology creating a meaningful outcome. This lesson study research has processed and applied these steps throughout the lesson study to achieve valid results. Takahashi and Yoshida (2004) also have a positive opinion of this methodology as they indicate it is used to plan, conduct, observe and reflect on a research lessons designed to gather evidence which helps us retrieve focused results. The research lesson is taught in a regular classroom environment, a focus group is chosen to engage in the lesson which is specific to a research question. The outcome of the lesson is then evaluated to see what the results show.

The methods of data collection used throughout the process are reflection, observation (non participant) and focus group. These methods fit in well with lesson study research as it is a controlled environment where the focus group is chosen specifically.

Observational method

My observational notes gathered throughout the process of the lesson are categorised into five different headings. These were non-participant observations as we were simply watching the lesson with no input installed. We looked through a number of different observational models however they did not touch on the variables we concentrated on. We created our own observational model (appendices 3). This observation model was used to gather qualitative data; there was no right or wrong answer however students' perceptions were paramount for us to gather evidence as the researchers. It was effectively sectioned, so the observational notes clearly sat in the correct heading.

There are some key variables which need to be considered when observations are used as a method within research. Wickstrom and Bendix (2006) recognise the Hawthorne effect as a potential barrier to observations suggesting that students modify their behaviour as they recognise they are the subject of an investigation. This could have an impact on the results which then questions the reliability of the findings. Cook, D (1967) also distinguishes the Hawthorne effect as a barrier within observation as it is in planned experimental conditions which are not the norm resulting in the potential of a different outcome. Both researchers are in agreement suggesting that observations and reflections need to have a balance between the truth and what could be perceived as a improper behaviourism. Hodkinson (2001) recognises observations as a beneficial method when collecting qualitative data as the researcher can gather a perception of the challenge as it happens. Observing the stimulants which effect the students first had helped us as researchers to identify the potential benefits and barriers of peer assessment through observation.

Focus group and Interviews method

Focus groups are organised to explore a specific question, people's views and experiences are questioned to gather specific information (Zimmerman et al. 1990 cited in Kitzinger 1994), the focus group used were students of different capabilities. My research partner and I came to the conclusion of this focus group as the literature gathered illustrates that students need to be at the same level within higher education. Identifying this focus group questions whether the ability level is just as important at the foundation phase in comparison to higher education. The size of the focus group increased from four students within the first lesson to eight students in the second research lesson, creating more qualitative research evidence.

Kreuger and Casey (2002) recognise focus group interviews having many characteristics, these include: recruited participants and interacting in a comfortable environment led by a skilful moderator. After reading this literature we have focused on implementing this environment within our study. This will essentially create an authentic environment where the students are more than happy to state their opinions and more importantly explain why they felt this way. Kelly (2003) has the opinion that focus group interviews allow the researcher to tease out participants' thoughts and feelings, whereas in a structured interview this is not achievable (Cited in Campbell, 1988). This method offers a practical approach for school students in comparison to a structured interview. A structured interview is a quantitative research approach (Levashina, 2014) where students have a small scale to voice their opinion, this method would offer less explanations as students would not be able to voice their opinions or bounce off each others' thoughts. Within these interviews the students were asked six different questions regarding the lesson they were a part of. The questions used are open convergent questions to get an opinion/feeling based on the individual's judgement (appendices 4).

Reflection model used

The reflections were captured using Gibbs (1988) reflective model. The reflective model is split up into six different variables. These variables were precise and offered a clear scope to reflect on the outcome of the lesson completed. This model allows students to think of concrete actions they could take to improve the outcome of the lesson (Quinton and Smallbone 2010). This indicates that this reflective model makes the participants question their opinions and actions throughout the lesson, emphasising why they acted the way they did. Reflecting on the lesson allowed us to then make changes in the second lesson study to maximise the results.

Ethical Considerations

There are many ethical considerations when undertaking research in a classroom. The proposed methods within the research are extremely focused (page 4). Each method used is broken down explicitly so no ethical boundaries are broken. The risks of the research are identified with a method to overcome these issues throughout (page 9). Israel and Hay (2006) are aware that confidentiality is key within a piece of research as they mention that penalties can occur if confidentiality is breached. Throughout this ethics form confidentiality is appropriately discussed and all the participants are aware that their identity will not be shown (page 11). This ethics form was approved allowing the research to progress. All students who completed the lesson returned a signed consent form illustrating their approval of the study (Appendices 7).

Lesson Study 1 results and discussion of research

Lesson one was conducted in a year one class. Within this study there was a focus group of three participants. All three drew a picture of a butterfly. The success criteria of the lesson was then introduced where students could see what the end result should be. Controlled peer assessment was introduced allowing the participants to give their opinions on their peers' butterfly. A second drawing of the butterfly was completed to see how effective peer assessment was. This was repeated a second time resulting in three pictures of a butterfly from each participant. The thought process throughout the first drawing was minimal as there were no expectations from the teacher. The second peer assessment plenary was extremely interesting because participant 3 had no intentions on listening to their friends thoughts/feelings when their work was reflected upon (see appendices 3). The participant showed negative body language, she sat on the floor covering their ears. Sedgewick and Greenwood (2015) imply that students change their behaviours the most when they are under constraints to deliver a particular outcome. This agrees with Falchikov (2004) opinion. Participants 1 and 2 worked very well collaboratively throughout, promoting peer assessment in the foundation phase (appendices 3). This backs up Spiller (2012) agreeing with Hanrahan and Isaacs (2001) who suggest that peer assessment is effective when students contribute constructively in collaborative efforts. These results indicate that participants within this class need some guidance from the teacher so students air both positives and negatives regarding their peers' work. This suggests that peer assessment has proven very effective however the teacher needs to remain involved.

The interview questions used allowed participants to give their opinions through explanation. Rock and Wilson (2005) recognises open ended questions as a strategy to gain an in-depth understanding of the participants' thoughts/feelings. Participant 3 answered a question suggesting their thoughts/feelings on other people looking at their work. Participant 3 suggested that she did not like her work getting critiqued because it made her upset (see appendices 1, lesson study 2). Orsmond (2006) suggests that any scrutiny formed to a student can alleviate any insecurities they already have. This could explain the reason in which participant 3 struggled to listen to her peers within the group. Participants 1 and 2 agreed with the impact their peer had on their work. As Spiller (2012) and Gokhale (1995) agree that the effectiveness of collaboration promotes critical thinking. This is very rewarding to see that participants 1 and 2 identified its benefits too. Both students were in agreement that their peers' opinion helped them meet the success criteria by stating 'My friend told me I needed to make the wings a different shape' (appendices 1, lesson study 2). The participants recognised that peer assessment can be used all over the curriculum. Participant 1 suggested 'English, you can read someone's story and tell them what they could add to make it better'. Topping (1998) and Cassidy (2006) both completed a study looking at peer assessment in many different subjects within college. This identifies peer assessment as a strategy used across the curriculum in the higher education; the participants' opinions suggest that there is scope that this strategy can transform through foundation phase just as well.

It was clear to see that two of the three participants had a very successful experience of peer assessment throughout the lesson. Brindley and Scoffield (1998) suggest that peer assessment is a collaborative way where students can increase self motivation and participation in the learning. This was evident through the pictures created. Gibbons (2012) and Nuntrakune and Park (2011) agree with this as participants work together gaining confidence in the work they are completing (appendices 4 and 5). Participant 3 had both positive and negative experiences throughout the lesson study, the first peer assessment plenary was successful whereas in the second other judgements of this individuals work were not welcome. Tama (1989) backs up the opinion of Hanrahan and Isaacs (2001) as this researcher identifies critical thinking as a variable to collaborative learning. It was clear this participant did not work collaboratively and therefore think critically of neither their or their peers' work. This made me question the different ways the teacher could overcome this problem so a student does not feel isolated. Another variable which could affect this would be the fact someone was watching them (Wickstrom and Bendix 2006). Opinions are an integral variable within peer assessment so it is paramount that the peer assessment needs to be managed so the participants who may struggle with constructive criticism are not affected. As Falchikov (2004) suggested students may find it difficult to receive criticism from

their peers as they could be competitive to create the best piece of work. Reflecting on this lesson has made me realise that students need more praise about their work instead of focusing on what they need to change, this needs to be incorporated for peer assessment to be seen as a positive form of assessment. To collect better evidence in the second lesson study, we altered a few variables. The class size increased so students felt as though they were in an authentic environment, attempting to eliminate any changes of behaviour because there is such a small focus group. The feedback process will follow the 'sandwich' strategy (Von Bergen et al, 2014) of Compliment-Criticism-Compliment. Arnerich (2018) values the Leuven Scale as an adaptive process which can be used to complete an observation. This scale (once modified) would categorise the observational results allowing my partner and I to compare how successful their findings are between participants. Although the observation model has been questioned we have kept the observational model within this study the same to keep the reliability and validity of the lesson consistent. The reflection of this lesson identifies peer assessment as a very effective strategy within the foundation phase as all students showed improvement within their drawings.

Lesson study 2 Results and discussion of research

This lesson study had eight participants. The focus group included three individuals who were in different ability groups. Within this lesson the participants drew and coloured a butterfly. Controlled peer assessment was implemented on two separate occasions where students gave their opinions and thoughts on their peers' work. After the first drawing the participants were given a success criteria, they used this to assist their peers giving them advice on their second drawing. The participants then completed a second butterfly applying the opinions their peers have given them. This process is repeated a third time resulting in three different drawings of a butterfly. Throughout the lesson all three participants were engaged and worked collaboratively to improve each other's work. Wood (2008) and Vickerman (2009) agree and recognise engagement levels within peer assessment develops autonomous learners to both act and reflect on their work. Donaldson (2015) review of the curriculum suggests that both researchers back up the professor's opinion of using peer assessment. The way the teacher led the peer assessment was extremely important as all of the participants tried very hard to identify the pros and cons of their peers' work. The Hawthorne effect (Cook, 1967) needs to be considered throughout the lesson as the students may have behaved this way because they knew they were observed in contrast to participant 3 from the first lesson study showing poor behaviour traits. The teacher controlled peer assessment through a different approach to the first lesson, this was an effort to maintain engagement and confidence throughout,

agreeing with Gibbs and Simpson (2004). The focus group completed three different drawings of a butterfly, each drawing is different and more of the success criteria is met throughout the process of each drawing, the feedback from their peers has had an impact on their drawings, agreeing with Maarof (2011). This suggests that peer assessment has proven very effective within the foundation phase throughout the lesson. All participants remained positive throughout the lesson and recognised that peer assessment improved their work.

The interviews differed from the first lesson study where there were four participants in each interview. Again, open convergent questions were applied in an effort to attain reliable qualitative results. Price (2002) recognises laddered open questions where the researcher asks questions based on previous answers promotes the chances of qualitative information to be gathered, agreeing with Wilson (2005). The same questions as used in the first lesson study to retain reliability of the results, prompts were used to draw this information from the participants. All three individuals recognised peer assessment as a very effective strategy to make their work better as they all answered a question regarding their friends helping them with a positive reaction (appendices 2). The three participants who's answers we were focusing on were from different ability levels. This was a variable used to see if peer assessment can be an effective form of assessment within the foundation phase. The results show through the interviews indicates that peer assessment can be used effectively through different ability levels as all of the participants completed the task effectively (appendices 5). Two of the three individuals recognised that this strategy can be used in different lessons indicating the complexity of peer assessment (appendices 2). Participant 1 and 3 recognised the role of the teacher, suggesting they kept the participants on task and specific to the assessment of other students' work. This joins Falchikov (2000) and Maarof (2011) opinions as it solidifies the impact peer feedback has on the participants however it needs to be controlled by the teacher.

It was clear the focus group was comfortable with their surroundings and worked effectively as if they were in class. Participants 1,2 and 3 all remained enthusiastic throughout as they were happy with the two compliments, they received either side of their constructive criticism (putting Von Bergen et al 2014 into practice). The group of students within the lesson was larger than the first lesson study creating an authentic environment. Herrington et al (2014) suggests that an authentic environment allows students to remain comfortable throughout the experience, as it is perceived as the norm. This is why there were eight students instead of three. This agrees with Yurdabakan (2011) who believes that authentic environments can maximise the outcome the researcher is exploring. The teacher also implemented the 'sandwich' strategy, Doscheff (1990) regards this strategy as a positive approach giving students' satisfaction in their performance. The teacher used this strategy to keep all the

students engaged and confident in their work. To offer a comparison on their understanding of peer assessment individual interviews offer a quantitative approach. This could be beneficial. The three images (appendices 5) indicate that peer assessment was used effectively as the drawings gradually improved; achieving more of the success criteria each time. Giddings and Grant (2006) have looked at mixed methods within research to see if they can complement each other. Qualitative components compliment quantitative data as qualitative information can be interpreted as evidence towards the quantitative results. This suggests that more evidence could have been gathered if quantitative strategies were used. Modifying the Leuven scale would allow quantitative data to be gathered to collect better evidence, agreeing with Arnerich (2018). The evidence can then be interpreted on a scale to gather a judgement of how effective the assessment method has been.

Conclusion

The results gathered and discussed illustrate that peer assessment can be used as an effective form of assessment within the foundation phase. The methods used have successfully identified peer assessment within a lesson study environment as a positive experience for students to work collaboratively to improve each other's work. Qualitative data was gathered successfully throughout each method. One benefit of the observation method used within a lesson study is that collaborative learning is easily recognisable as the observer can see the collaboration take place (Gokhale, 1995). Hodkinson (2001) recognised observation as a successful method to see student's behaviours and engagement as it happens. Observing the behaviours first hand increased the reliability of the results, this is beneficial because the data gathered is not transferred between researchers increasing the likelihood of the results getting misinterpreted. Observing the changes in behaviour with peer assessment as the stimulus allowed us as the researchers to consider the effectiveness peer assessment had on the participants. A limitation of this method recognises the Hawthorne effect. Wickstrom and Bendix (2006) and Cook (1967) are in agreement that the Hawthorne effect where students change their behaviours because of an external individual present could have an impact on the reliability of this results gathered. This is recognised as a limitation to the method (shown in appendices 4, Lesson study 1, participant 3) because the participant did not finish their final drawing, leaving gaps in the evidence gathered which then questions the validity of the observation. Another limitation to this observation method was that both my research partner and I struggled to keep up with the lesson while making qualitative notes on the events taking place. By the time we recorded one piece of information we had to write a second down, this was a barrier as we could have missed out on some key events.

Lesson study interviews were applied as a method to gather as much qualitative information possible to assess the effectiveness of peer assessment within the foundation phase. This method was beneficial to us as researchers as we could hear the participants' perspective regarding the form of assessment to see if they feel it effected their work. Both Maarof (2011) and Gibbs and Simpson (2004) had differences of opinion regarding feedback. The interview results indicated that all of the participants acted on their peers' feedback at least once (appendices 1,2,4 and 5). One student struggled to listen to their peers' feedback a second time (backing up Orsmond 2006), this opinion from the student proves that interviews are beneficial because we would have made an assumption of the participants' behaviours changing (due to Hawthorne effect) whereas now we appreciate that the student was not comfortable with their peers' feedback (appendices 1, lesson study 2). This suggests that Gibbs and Simpson (2004) opinion that the teacher needs to be present during peer assessment is reliable. The interview method has made me recognise that peer assessment must be managed effectively through the teacher so this form of assessment is effective for all students. I piloted the second lesson study and interviews with a soul focus on trying to effectively use peer assessment for all students. Applying the 'sandwich' method within the peer assessment plenaries had a positive impact on all the students, backing up Doscheff (1990) opinion (as shown in their interview answers, Appendices 2). The interviews gathered numerous amounts of evidence implying peer assessment as very effective within the foundation phase.

The reflective model executed was beneficial to us as it gave us different angles to look at the effectiveness of the first lesson study. This was beneficial as we could see what needed to be changed in the second lesson study. This would allow opportunity to gather as much evidence recognising the effectiveness of peer assessment as possible. Through the reflective model we changed three variables of the lesson. The first being the size of the class. Making the class bigger allows authenticity to rise so we can see the effectiveness peer assessment would be within a real-life scenario. This backs up both Yurdebakan (2011) and Herrington et al (2014) who recognise that authentic environments have a big impact on a particular result. Without this reflection model we would not have recognised the need to alter the class size; doing this has allowed us to identify how successful peer assessment was within an authentic environment. The reflective model used allowed us to alter the second lesson study allowing us to see if peer assessment had a positive impact on all of the lessons. It was clear that peer assessment was extremely effective within the second lesson study with a 100% success rate through both the students' opinions and their final drawings (appendices 5).

When I begin my next school experience I will use peer assessment as one of many forms of assessment. I will make sure the peer assessment is controlled and all students are

‘sandwiching’ their opinions between compliments of their peers’ work. The lesson study results shows many rationales as to why peer assessment is effective within the foundation phase. This will help me move forward however I will always take the lead with this form of assessment to make sure all students get the most out of their peers’ feedback.

Recommendations

In reflection, I would use a different observational model to collect the findings. The Leuven scale is recognised as a quantitative approach which can be altered to fit the research aim. I feel combining both quantitative and qualitative methods as Giddings and Grant (2006) suggested would be the most beneficial way of extracting as much data as possible to then make a interpretation on the effectiveness of peer assessment. Applying the Leuven Scale would have also given me as the researcher more scope to compare the students’ engagement and behaviour within the observation process. This method allows me to identify how effective peer assessment has been on a grid marked 1-5. Again, adding a quantitative interpretation instead of just a qualitative opinion. I would also adjust the lesson so only the peers can observe the success criteria of the butterfly. This would focus solely on the peer assessment taking place instead of the students using self-assessment subconsciously. Sharing this practice allows teachers to implement peer assessment within their lessons with confidence because they know there is evidence suggesting this form of assessment for learning is very effective as long as it is delivered correctly.

References

Arnerich, M. (2018). *How To Apply The Leuven Scales In Practice | Famly*. [online] Famly. Available at: https://famly.co/blog/management/leuven-scales/ [Accessed 15 Feb. 2020].

Boud, D. (1995). Enhancing learning through self assessment. London: Kogan Page

Bradbury, H. ed., 2015. *The Sage handbook of action research*. Sage.

Brindley, C. and Scoffield, S., 1998. Peer assessment in undergraduate programmes. *Teaching in higher education*, *3*(1), pp.79-90.

Campbell, D. (1988). Methodology and epistemology for social science. Chicago: University of Chicago Press.

Cassidy, S., 2006. Developing employability skills: Peer assessment in higher education. *Education+ training*.

Cook, D.L., 1967. The Impact of the Hawthorne Effect in Experimental Designs in Educational Research. Final Report.

Docheff, D.M., 1990. The feedback sandwich. *Journal of Physical Education, Recreation & Dance*, *61*(9), pp.17-18.

Donaldson, G., 2015. Successful futures. *Independent review of curriculum and assessment arrangements in Wales*, *25*.

Education.gov.scot. (2018). *Dylan Wiliam - Self and peer assessment | Practice exemplars | National Improvement Hub*. [online] Available at: https://education.gov.scot/improvement/practice-exemplars/dylan-wiliam-self-and-peer-assessment [Accessed 08 Feb. 2020].

Falchikov, N. (2004). Improving assessment through student involvement: practical solutions for learning in higher and further education. New York: Routledge Falmer.

Falchikov, N. and Goldfinch, J., 2000. Student peer assessment in higher education: A meta-analysis comparing peer and teacher marks. *Review of educational research*, *70*(3), pp.287-322.

Gergen, K.J. (1995). Social construction and the educational process. In M. Larochelle, N. Bednarz, & J. Garrison (Eds.), Constructivism and education (pp.156-172). Cambridge, UK: Cambridge University Press. ge. And Vygotsky, L.S. (1978). Mind in society: The development of higher psychological process. Cambridge, MA: Harvard University Press. [cited in Rock,

T.C. and Wilson, C., 2005. Improving teaching through lesson study. *Teacher education quarterly*, *32*(1), pp.77-92.]

Gibbons, P., 2002. *Scaffolding language, scaffolding learning*. Portsmouth, NH: Heinemann.

Gibbs G (1988). Learning by Doing: A guide to teaching and learning methods. Further Education Unit. Oxford Polytechnic: Oxford.

Gibbs, G., & Simpson, C. (2004). Conditions under which assessment supports students' learning. Learning and Teaching in Higher Education, 1,3e31. Cited in: Gielen, S., Peeters, E., Dochy, F., Onghena, P. and Struyven, K., 2010. Improving the effectiveness of peer feedback for learning. *Learning and instruction*, *20*(4), pp.304-315.

Giddings, L.S. and Grant, B.M., 2006. Mixed methods research for the novice researcher. *Contemporary nurse*, *23*(1), pp.3-11.

Gokhale, A.A., 1995. Collaborative learning enhances critical thinking.

Hammond, J., 2001. *Scaffolding: Teaching and learning in language and literacy education*. Primary English Teaching Assoc., PO Box 3106, Marrickville, New South Wales, 2204, Australia.

Hanrahan, S.J. and Isaacs, G., 2001. Assessing self-and peer-assessment: The students' views. *Higher Education Research & Development*, *20*(1), pp.53-70.

Herrington, J., 2005. *Authentic learning environments in higher education*. IGI Global.

Hodkinson, P., Hodkinson, H. (2001). The strengths and Limitations of Case Study Research. Cambridge: University of Leeds. pp5-11.

Israel, M. and Hay, I., 2006. *Research ethics for social scientists*. Sage.

Kelly, B.T., 2003. Focus group interviews. *Research in the college context: Approaches and methods*, pp.49-62.

Krueger, R.A. and Casey, M.A., 2002. Designing and conducting focus group interviews.

Maarof, N., Yamat, H. and Li, K.L., 2011. Role of teacher, peer and teacher-peer feedback in enhancing ESL students' writing. *World Applied Sciences Journal*, *15*(Innovation and Pedagogy for Lifelong Learning), pp.35-29.

Nuntrakune, T. and Park, J.Y., 2011. Scaffolding techniques: a teacher training for cooperative learning in Thailand primary education.

Orsmond, P. 2006. Self- and peer assessment: Guidance on practice in the biosciences. York: Higher Education Academy. Cited in: Vickerman, P., 2009. Student perspectives on formative peer assessment: an attempt to deepen learning?. *Assessment & Evaluation in Higher Education*, *34*(2), pp.221-230.

Price, B., 2002. Laddered questions and qualitative data research interviews. *Journal of advanced nursing*, *37*(3), pp.273-281.

Quinton, S. and Smallbone, T., 2010. Feeding forward: using feedback to promote student reflection and learning–a teaching model. *Innovations in Education and Teaching International*, *47*(1), pp.125-135.

Rock, T.C. and Wilson, C., 2005. Improving teaching through lesson study. *Teacher education quarterly*, *32*(1), pp.77-92.

Sanders, D. and Welk, D.S., 2005. Strategies to scaffold student learning: Applying Vygotsky's zone of proximal development. *Nurse educator*, *30*(5), pp.203-207.

Sedgwick, P. and Greenwood, N., 2015. Understanding the Hawthorne effect. *Bmj*, *351*, p.h4672.

Spiller, D., 2012. Assessment matters: Self-assessment and peer assessment. *Teaching development unit*, pp.1-19.

Takahashi, A. and Yoshida, M., 2004. Lesson-study communities. *Teaching children mathematics*, *10*(9), pp.436-437.

Tama, M.C., 1989. *Critical thinking: Promoting it in the classroom*. ERIC Clearinghouse.

Topping, K., 1998. Peer assessment between students in colleges and universities. *Review of educational Research*, *68*(3), pp.249-276.

Topping, K.J., 2009. Peer assessment. *Theory into practice*, *48*(1), pp.20-27.

Vickerman, P., 2009. Student perspectives on formative peer assessment: an attempt to deepen learning?. *Assessment & Evaluation in Higher Education*, *34*(2), pp.221-230.

Von Bergen, C.W., Bressler, M.S. and Campbell, K., 2014. The sandwich feedback method: Not very tasty. *Journal of Behavioral Studies in business*, *7*.

Welsh Government (2010) How to develop thinking and assessment for learning in the classroom. Welsh Government.

Wood D. A scaffolded approach to developing students' skills and confidence to participate in self and peer assessment. InATN Assessment Conference 2009: Assessment in Different Dimensions 2009 Nov (p. 374).

Wood, D. and Kurzel, F., 2008. Engaging students in reflective practice through a process of formative peer review and peer assessment. *ATN Assessment*, *1*(1).

Yurdabakan, I., 2011. The investigation of peer assessment in primary school cooperative learning groups with respect to gender. *Education 3–13*, *39*(2), pp.153-169.

Zimmerman, M. et al. (1990) Assessing the acceptability of NORPLANT implants in four countdes: findings from focus group research. Studies in Famiiy Pianning, 21, 92-103. Cited in Kitzinger, J., 1994. The methodology of focus groups: the importance of interaction between research participants. *Sociology of health & illness*, *16*(1), pp.103-121.