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Teachers' Views of Online Assessment and Feedback: A Research Protocol

Walifa Rasheed-Karim
Fellow of the Society for Education and Training

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ABSTRACT: *This paper presents an analysis of assessment and feedback at Company X (the author's place of work). This paper outlines the issues related to the development of practice in terms of instruction, assessment and feedback and the way in which these can be achieved. A methodology involves the use of an online questionnaire to answer research questions and this can be used to develop understandings of other online companies use of assessment and feedback when teaching learners with specific learning needs (SEN). A discussion examines how the development of practice might use a combination of instruction, assessment, and feedback types with an emphasis on improving learners' subject language skills. Further research, contribution to knowledge and implications of this research proposal are discussed with a view to the development of research methodology which may address the needs of students and pupils with SEN at schools.*

KEY WORDS: assessment, feedback, online learning, SEN

INTRODUCTION

This paper aims to investigate the views of teachers who use an online teaching platform for assessment, feedback and learning by students (11-16 years of age) at key stages 3 and 4 in secondary schools and primary pupils (7-11 years of age) at Key Stage two. Teaching online is generally viewed as Private Tutoring. This has an established history of improving learners' successes in school subjects (Cullinane & Maontacute, 2023) and is a relevant area of discussion in relation to socio-economic status (SES) and geographical divide in the U.K. Even though Omerogullari, Guill and Koller (2020) found that generally there was not a positive effect on learners' knowledge because of longer time in tuition, secondary students benefited due to the interactive effects of learners' knowledge with teachers' qualifications in specialist subjects.

Jerrim (2017) identified that year eleven students in England on average spent 9.5 hours per week in extra tuition- provided by schools, family or private tutors. Year eleven English students from disadvantaged backgrounds spent 30- 45 minutes more in being tutored in science, mathematics and English that other learners. Nevertheless, Jerrim identified that 14% students from higher SES who were high achievers received tuition in science compared with 7% from disadvantaged backgrounds. Additionally, learners who were economically and socially privileged spent more time with subjects such as music, sports and foreign languages. The author reasoned that learners preferred these subjects because they developed cultural understanding and Jerrim (2017) concluded that (SEN) was a factor that

interacted with tuition time and the subjects learned by students/pupils. More recently, the National Tutoring Programme (NTP) was instigated by the government (Cullinane & Montacute, 2023). The authors pointed out that 87% of schools used it in 2021/2022 and the programme should now be focusing on the needs of disadvantaged learners across the geographical divides with the application of standards in quality and sufficient funding.
The National Tutoring Programme (NTP) an initiative funded by the government during school closures. Tuition is subsidised by NTP and purchased in blocks of fifteen hours. NTP subsidises 70% of costs and schools pay 30%. The costs are typically lower than older established agencies. The support can be long-term for teachers, and they continually monitor pupils' progress. Summary reports are available for Ofsted inspectors as well as for parents and guardians. It is envisaged that an aim for online teachers is to promote inclusivity in teaching and this may be reflected in feedback to learners.

The focus for teachers who use online platforms would be tailored to mastering the delivery of lessons, assessment and feedback. As teachers identify misunderstandings and lack of knowledge of learners, formative feedback and assessment is a useful strategy which can be used by teachers. Taking account of learners' feedback may also be relevant for the achievement of their goals as well as teachers as learners may indicate the usefulness of formative assessment used by teachers. Dolin *et al*. (2018) identified that definitions of formative assessment include the following:

> '*Formative assessment is a process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students' achievement of intended instructional outcomes'*. (McManus 2008).

The type of formative feedback and assessment procedures used by teachers may be relevant to students/pupils and this may vary across subject specialisms. It is suggested that different types of feedback may produce various learning outcomes. Furthermore, the extent to which summative assessment can address any weaknesses of formative feedback requires addressing with respect to online teaching using for example the Uniko platform (2023).

This paper presents a methodology based on an online questionnaire that investigates the extent to which online formative and summative assessment addresses the needs of students and pupils across a range of socio-economic statuses (SES) and special education needs (SEN). It therefore presents a discussion of ways in which teachers could improve the skills of learners.

Online Private Tutoring

Private tutoring, also known as shadow education, is conducted during school hours or after school, and formal assessment is embedded in its delivery (Bray, 2017). The aim is to raise learners' levels of knowledge and understanding in subjects taught at school such as English, maths, and science. That is, private tutoring is closely aligned with formal education, and is an offshoot of mainstream education.

The Unicko platform (2023) is an online virtual classroom that has several features. A whiteboard enables writing and drawings for example, of the structure of a flow when explaining Key Stage Three plant fertilisation. Collaborative text editor allows the analysis of questions, and the teacher can provide a frame for this. Teachers can share media files and YouTube clips. This may be helpful for learners who prefer to learn by visual presentations. They can stop videos intermittently and make notes. Some companies have information sheets that provide explanations of key terms. The chat allows leaners to send messages, and the 'raise the hand' button enables teachers to view and manage a list of learners who are asking questions. Breakout rooms facilitate small group collaboration or learners can be put into separate rooms for teaching individual learners.

The Uniko platform enables the uploading of Powerpoint slides and sets of tasks on topics such as science-Physics, Chemistry and Biology. *Http:// links* allows learners to access topics and learners have access to individual slides with questions, options for answers and answer boxes. Learners may also be asked to write short paragraphs in answer boxes. In the teaching process, teachers post at least three links and learners have access to these. These links are based on summative assessment results in the lesson or from a previous lesson.

The online facility of tutoring in the U.K. provides the opportunity for students/pupils and teachers to access learning materials in a wide range of subjects and this covers primary and secondary school learners. All tutors have up-to-date knowledge of a range of examination boards- OCR, AQA and Edexcel. There are group tuition sessions with learners from schools during and after school hours and one: one tuition with students who may have safeguarding issues in terms of behaviour. That is, some learners may be exempt from mainstream education and select online private lessons instead. There are alternative pupils/students such as those in schools for special educational needs (SEN) who are dyslexic, have attention deficit hyperactivity disorder (ADHD), autism or a combination of these. The classes consist of either one, two or three learners. Some may have special educational needs or be from disadvantaged backgrounds and are suited to 1:1 tuition. Qualified teachers use the content of syllabuses to deliver lessons and students complete an initial assessment which the teacher will use to design a learning plan around their needs.

Inclusivity and Feedback

For the Committee on the Rights of Persons with Disabilities (UN 2016), inclusive education means:

> *'A fundamental right to education; A principle that values students' wellbeing, dignity, autonomy, and contribution to society; A continuing process to eliminate barriers to education and promote reform in the culture, policy, and practice in schools to include all students'.* Schuelka (2018 p.3).

Hence, the Equality Act and peoples' rights under the Equality Act (2010) is implemented in the teaching process. That is, after the needs of students are established, they are supported in receiving an education that is equal to their peers. This may be helped by making reasonable adjustments to facilities in examinations such as extra time and the opportunity to use computers with spelling checks.

Wu (2013) interviewed Dr. Carol Tomlinson on differentiation, and she noted that to be effective with differentiation, it is important that teachers understand how students are progressing in their learning. She added that assessments are therefore important. However, Van Geel *et al*. (2019) theorise that teachers should not use a one-size-fits-all approach, but rather teaching should meet learners' individual needs (George, 2005). Others such as Parsons *et al*. (2018) even stated that adapting instruction is "a cornerstone of effective instruction" (p. 206) and Tomlinson and Imbeau (2010) further stated that:-

> *'The core of the classroom practice of differentiation is the modification of four curriculum-related elements – content, process, product, and affect – which are based on three categories of student needs and variances – readiness, interest, and learning profile' (p. 15).*

Teachers at various stages in their careers may still be developing strengths in the strategies used to meet the needs of mixed ability groups but it is apparent that teachers' strategies including assessments and feedback are fundamental to meeting the needs of learners.

Assessments

Online assessments test knowledge and understanding, problem-solving, and application of concepts. They take place when they are booked online by schools. The teacher will see summative assessment results, which are provided instantly. It is suggested by the author of this paper that assessments are essential for teachers and learners as they become informed of the progress being made in learning. Companies delivering online assessments may require that students are assessed in their first lesson in a subject and after 7-10 lessons. To check learners progress using the Uniko platform at Company X, teachers use formative assessment such as asking pupils relevant questions as well as checking longer written answers so that errors can corrected. They may use the whiteboard to help develop answers with learners. Lesson links are progressive in details of questions. For example, the science topic 'carbon dioxide and methane and greenhouse gas' begin with a first question:

Fill the gaps with suitable words
Carbon dioxide is formed from _____+_____.
(Answer: 1 word + 1 word)

The lesson links sent to learners have a final question and this is a summary task that examines ideas/concepts learned in a topic.

> *'Explain how carbon dioxide maintains temperatures on Earth to sustain life, and how this can cause Earth's atmosphere to heat up too much. What are the associat ed issues with Earth's atmosphere heating up too much?'*

Online teachers can adapt their lesson plans if the learner asks because of for example there is an impending test or examination, and the student needs to revise topics. When using the Uniko platform learners' assessment needs for a subject are therefore addressed with the teachers' support in separate classrooms.

In group teaching learners meet in the Unicko Main Room at Company X initially and the teacher will set a starter activity lasting five minutes and then teach using the whiteboard and text for ten minutes. Teachers then send there or more topic links to all students. A plenary at the end of the lesson involves a brief discussion of what learners found interesting about the lesson and what they learnt or found difficult. The teacher may be able to gauge where each student lies in terms of current knowledge and understanding of a topic. The plenary may also help learners to reflect on their progress and what they should do to improve their knowledge and understanding. Therefore, during the teaching process, formative feedback is embedded in lessons so that learners think about their understandings and correct misconceptions using feedback. The aim is to address learners' differences in ability, preferences, and prior learning. Their work can be used to monitor their acquired knowledge. Consequently, diagnostic tests enable teachers to check learners' strengths and weaknesses.

After each summative assessment learners are presented with a pop up showing their results. The National Foundation for Educational Research (NFER, 2023) concluded that summative assessment condenses what pupils have learnt after a period of time. This may not be apparent for some online assessments. For example, an assessment question in science is: '*Which of the following would not increase the magnetism of an electromagnet?'* The pupil chose from options: *Adding more turns to the coil*. This was recorded incorrect, and the Tag topic area was Physics: Electromagnets. Another science question asked: '*Which of the following is true for both an egg and a sperm*. The pupil answered '*Both have lots of cytoplasm that contain n*utrients. This is incorrect. The Tag: Biology: Fertilisation. On completion of assessments, only the Tag is seen and not specific questions where learners made errors. The same questions would be asked in later assessments and if the teacher does not address the questions type, the learner is likely to make the same error. That is, teaching areas such as the Tags identified may not always deal with specific errors made in assessments.

Online learning could be a necessary platform worldwide and finding ways to improve its delivery to all school age ranges is necessary. However, from experience where there is pre-assessment on school premises; it is not certain that pupils do not receive help from peers and so the levels of assessment of pupils are not accurate.

Feedback

According to Pfeiffer, Feinberg and Gelber (1987) the role of the teacher should be not to encourage passivity by students but to encourage practice, motivation and feedback. Additionally, Skinner (1968) espoused the use of positive reinforcement such as the use of praise and this includes telling learners what was right in the answers, they produce rather than what was wrong. That is, teachers should emphasise that making mistakes is part of the learning process. When feedback is combined with effective instruction in classrooms, it can be very powerful in enhancing learning (Shepard *et al*., 2005). Others such as Van Der Kleij and Adie (2020) pointed out that if feedback is not understood by students, or not perceived by the learner as intended, it is unlikely that the feedback message will achieve its intended effect of supporting pupils' learning. The authors pointed out that feedback

effectiveness is context, subject, and individual dependent and according to Tan *et al.* (2019), teacher-student interactions are important for learners' outcomes. It facilitates higher-order thinking and positive psychological needs support and fosters metacognition. Teachers, therefore, focus on feedback from pupils to improve their teaching. Teachers at schools may view comments made online and Williams (2015) notes that teachers may benefit from focusing on learners' reactions to feedback, which is necessary to improve pupils' learning.

The type of feedback and the way it is given can be differentially effective (Hattie and Timperley, 2007). That is, while feedback may benefit some learners it may be partially effective for others. Nevertheless, feedback and interpretations of assessments are significant for learners. The teacher is significant in that they can provide effective instruction and when combined with feedback may yield significant gains in learners' successes (Kluger & DeNisi, 1996). However, Hattie and Timperley (2007) point out that in some circumstances feedback can be ineffective if learning is insufficient at the start. Therefore, teachers will need to be helpful in guiding the student how to learn the key points in topics. The answer to "Where to next?" is important: how feedback can be implemented and how to proceed by providing solutions or next steps. Following feedback, refinement and seeking of more challenging goals are highlighted as having the highest likelihood of leading to greater achievement (Hattie & Timperley, 2007).

There are implications for Hattie and Timperley 's (2007), discussions of 'feedback'. One is that online assessments are used to provide snapshots of learning rather than providing information that can be used by learners to address feedback. Nevertheless, developing learners' skills in integrating feedback by evaluating and making judgements (Ajjawi *et al.*, 2018) may be facilitated by online teachers. However, it is suggested that online assessments as well as feedback can be measurements for schools. That is, schools decide on which areas of subject knowledge they need to focus on. Schools could conclude about learners' understanding and how they could improve for future assessments, identify strengths and weaknesses, and how to build on learning. Therefore, online teachers may be advised to link feedback to assessment criteria. This could be achieved by presenting the difficulty of tasks incrementally and providing feedback to help learners progress (Spiller, 2014). There should also be explanations of processes/strategies so that learning is deepened (Hattie & Timperley, 2007).

The Uniko platform at Company X enables learners to access further feedback from teachers. For example, when teaching subjects such as science, teachers add comments to written answers so that learners could improve. The following lesson plan shows feedback from a tutor for a Year Six school pupil.

Lesson Objectives
Complete questions on negative numbers, pie charts and direction
Scores
10/10 on Number > Negative Numbers > Negative Numbers 10 (-4 x -2 =)
10/10 on Data Handling > Pie Charts > Pie Charts 4
9/10 on Data Handling > Pie Charts > Pie Charts 5
4/6 on Shape, Space and Measures > Direction > Direction 3

Other Resources used during this lesson
Web resources in maths
Student Progress recorded by the teacher:
Very good progress was made today and they were able to show an improved understanding of the work we completed.
Next Steps recorded by the teacher:
Rotational symmetry
Symmetry https://lessons.tlclive.com/problem?id=6821
Simplifying fractions
https://lessons.tlclive.com/problem?id=2174
Simplifying ratios
https://lessons.tlclive.com/problem?id=57546
Any Other Comments recorded by the teacher:
The pupil needs to revise rotation and how many turns there are in a 1/4, 3/4 clockwise.

The student on the other hand, can also record their feedback of how the lesson went for her/him. This is done by ticking an emoji faces denoting Excellent, Good, Okay and Poor. If learners choose poor, they have the option to explain why the found their lesson at this level. However, it could be that the feedback that learners provide may not match the teacher's feedback. A learner who found a lesson 'poor' may be recorded as 'improving in understanding' by a teacher. Nevertheless, the aim for each teacher is to improve learners' interest in topics taught. Teachers of learners with SEN such as attention deficit hyperactivity disorder (ADHD) may provide information in smaller pieces using a multisensory approach. The teacher will make material relevant to real-life and to obtain maximum benefit from tailored strategies, teachers will remain cheerful. Dewey (1997) discussed that that the quality of experience is relevant for learners as it influences the interpretation of later learning experiences. It is envisaged that online assessment and teachers' feedback contribute to learning experiences and this is assessment by learners who may choose to provide feedback. Teachers may use these to be reflective of their teaching strategies. Lesson observations at Company X (the researcher's online teaching company) are recorded and Quality Control have accesses to these. Every six months, they review lessons and provide a report to teachers. This may help them to improve formative feedback and use of assessment results for each student/pupil.

Research Objective
To provide a development framework for online teachers who use assessment and feedback.

Research Questions
1. Are teachers' strategies in summative and formative assessment sufficient for students' progress in the long term?
2. In what way does teacher feedback of lessons support learning?
3. Are there preferred strategies that teachers use for students to learn?
4. Are online platforms suitable for teaching?

METHODOLOGY

The researcher contacted online companies and asked if they would be interested in taking part in a short questionnaire relating their views on online assessment and feedback. They informed me that it was not their business strategy to complete questionnaires for research. Others did not reply to a request for communicating their interest in the research. This research protocol therefore outlines a methodology for a case study. This could be extended or adapted to investigate feedback and assessment of online tutoring. A research brief informs participants of contents of the research (Appendix 1) with the link to online questionnaire. Appendix 2 shows the questionnaire.

Analysis

Research Question 1: Descriptive statistics is used for quantitative analysis. Statistics is carried out on answers relating to instructors' tactics in summative and formative assessment, such as mean, median, and standard deviation. For qualitative analysis, thematic analysis is used to find recurrent themes and patterns in teachers' perspectives and experiences on the efficiency of their assessment procedures in fostering long-term student improvement. Written replies are analysed to find these themes and patterns (Hancock, Algozzine & Lim, 2021).

Research Question 2: For quantitative analysis, descriptive statistics is based on responses to questions on the perceived influence of instructor feedback on students' learning. Qualitative analysis is made of written responses to find recurring themes and patterns in instructors' perceptions of how feedback promotes learning (Jiang & Ting, 2000).

Research Question 3: The proportion of instructors' favourite techniques that were indicated are calculated and an analysis of response frequencies using quantitative analysis is performed. A qualitative analysis is made of written responses thematically to find themes and patterns relating to the preferred teaching methods that teachers like using with their students. (Clarke & Braun, 2013).

Research Question 4: The percentages of favourable, negative, or neutral views on the suitability of online learning environments for teaching using quantitative analysis of response frequencies is calculated. Thematic analysis is used to find common themes and patterns in instructors' assessments of the appropriateness of online learning environments (Islam, 2020).

Descriptive statistics:
The frequency and percentages for demographic categories such as subjects taught, and year groups is determined. A summary of the participant characteristics may be given by this analysis.

Graphical representation:
To graphically display the distribution of instructors across various demographic groups, bar charts or pie charts are created. The demographic makeup of the sample may be shown with the use of this study.

DISCUSSION

New practice entails reviewing strategies for learners with specific needs**.** Online teaching of pupils with differences in learning arising from, for example, dyslexia and Attention Deficit Hyperactivity Disorder (ADHD) require that teachers use strategies that enable each learner's needs to be met. This requires that teachers are reflective of students' backgrounds and current academic needs. In this context teachers need to apply suitable strategies. It is discussed that teachers use of instruction, assessment and feedback techniques is relevant to the progress of learners and this is with respect to the management of group dynamics and student/pupils barriers to learning.

Managing group dynamics

When learners approach complex problems such as in maths and science, group dynamics builds supportive teams and when students struggle the teacher will clarify instructions so that everyone understands and move forward (Fogler & LeBlanc, 2008). When teaching groups, the authors also pointed out that teachers should set guidelines for learners such each learner allowing all of the group to take part in the lesson. The teacher will therefore be aware that it is important to ask questions and provide feedback for quieter members of the group. This is important to recognise as an essential teaching tool as some students may be neurodivergent such as autism, (for example-social and communication difficulties); dyslexia (problems with reading, writing and spelling); and dyscalculia (difficulty with recognising and using numbers such as in maths problems). By grouping learners with SEN who have the same styles (Mortimore, 2008) may reinforce successful learning strategies. In this way retention of information is enhanced. In contrast, learners who work together with different styles may help each other develop new approaches which utilises the group's strengths. The teacher will therefore recognise that a barrier to learning could be the preferred learning styles of students/pupils.

Recognise learners' mental barriers

Teachers should be encouraged to recognise blocks to learners learning. They might consider the specialisation of brain hemispheres and its contribution to SEN. For example students with dyslexia have characteristics associated with the right hemisphere of the brain such as impulsiveness and risk taking, preferences for:- ideas, pictures, creativity and spatial awareness. Those with Autism Spectrum Disorder (ASD) tend to have features associated with the left-brain hemisphere and they prefer using and accepting facts; they are logical, and details are important to them. Teachers have the natural tendency to teach according to their preferred styles (Hudson, 2016). Teachers' self-awareness of their styles is relevant to their use of teaching strategies to learners with dyslexia (Rasheed-Karim, 2021). Aiming to use a multisensory perspective in teaching with the Visual, Auditory, Kinaesthetic (VAK) perspective such that a mixture of resources is used that are engaging and stimulating during lessons. That is, teachers will endeavour to remove learners' mental

blocks arising from their preferred learning style (s). That is appropriate formative feedback will be used by teachers in addition to using a multisensory approach in the classroom.

However, learners may encounter perceptual barriers to learning which prevents them from identifying the solution and how to reach it. Fogler and LeBlanc (2008) stated that this may be due to learners being focused on minute details and therefore the salient aspect of the problem becomes lost in the mass of other information. Taking risks in problem solving is impossible due to fear of making mistakes. Such emotional responses are barriers to problem solving. Therefore, in formative feedback, teachers use of empathy and understanding of the students' difficulties is relevant to the learning process. Teachers may find it necessary to use instructional strategies to change skills which are well known by the learner. In this way errors in problem solving could be reduced (Nummedal, 1987).
Where students cannot reduce errors in topics such as maths and science, they could be encouraged to be more creative by asking themselves task relevant questions as well as making up analogies. Halpern (1987) for example reported that analogies can improve memory as well as understanding for events written in texts. Additionally, Brown and Salter (2010) outlined the importance of the use of analogies in developing students' knowledge and understandings of science topics. Teachers will use instruction to develop students use of strategies in making analogies and these may reduce errors. Errors could also be reduced when formative feedback include providing the context in which complex problems are broken into parts by learners and they practice problem solving. Eventually, learners will master each section and then the whole (Rosenthal, 1966).

CONCLUSION

Online assessments and feedback improve interest in topics, and this is seen in the feedback from learners at Company X. While summative assessments delineate areas learners need to work on, formative assessments enable teachers to gain understandings of progress made during online lessons. Teachers are then able to decide next steps, and this may be made through an analysis of how to differentiate tasks (for example, by using a step-by-step approach). Assessments enable the measurement of progress by teachers online as well as schools. It is argued that as well as providing feedback by assessments, teacher feedback to learners develops deeper levels of learning.

Initial assessment at Company X pose questions specific to the learner year and questions gradually drop to lower year levels according to how many errors the student/pupil makes. It is conceivable that errors are made by students due to not reading the question accurately or not knowing what words in the question means. Learners may also make careless errors due to not reading the question and applying analysis of its meaning. When choosing an answer, multiple choices are set. This may also not be helpful for some as options may overlap in meaning and content. An error is one question for a subject does not mean that the learner lacks knowledge of the broad topic. Therefore, assessment software should choose one or two other questions on a topic, and this will check whether learners genuinely have weaknesses in particular topics.

Nevertheless, Donaldson (1987) discussed that children progress is dependent on their language awareness. This is relevant for online learners because when thinking through

tasks for subjects such as maths and science knowledge of the meaning of words describing processes is required. Manageable set of options for answers may be apparent when learners know most of the words the read for a question. It is concluded that when the online teacher asks the student/pupil if they require 'help', this is a step towards facilitating the learners to tell them what and when they do not understand, and this may prompt learners to ask for more information. However, an asset for Company X is that each task has a 'Hint' sheet. This contains relevant information to complete tasks and can be used by students/pupils when they require explanations and information. The teacher can assist in reading the Hint sheet and explain new words to learners. However, the role of the teacher is to use information to facilitate practice in problem solving, motivation and feedback. It is therefore suggested that suitable instruction by teachers may improve learners English in answering questions and suitable formative feedback from teachers may improve students'/pupils' assessment results.

Further Research

Teachers plan lessons and these are sent to learners as links with topic titles. An automated system incorporated into online platforms which monitors topics covered in each session and produce suggestions for lesson plans in future session may be effective and this gives teachers time to focus on the analysis of the content of answers and how to eliminate human error. Nevertheless, teacher's skills will monitor the suitability of lesson plans generated. However, this requires research.

Asking learners what they would like to know for subject levels may be ineffective as some may think that they are generally weak across all topics of Physics for example when this may be exaggeration. Online assessments would therefore need to be adaptable and adjust to producing a variety of questions on subject areas learners are weakest in. Questions would be related to syllabuses and the same questions should not be asked when students make errors but examined for relevance to developing learners' knowledge.

The provision of feedback from learners is important as it provides important information to Company X about learners' enjoyment of lessons and whether changes could be made in nay area. Also, teachers who read the feedback may use it to reflect of their teaching strategies. At the end of lessons learners could be asked to complete a short questionnaire such as the following. This may be completed every month for learners on longer term tuition plans.

I have learnt new things during the lesson Y/N
I can transfer my knowledge to other topics and questions Y/N
The teacher was encouraging and helped me throughout the lesson Y/N
I would like to attend more lessons Y/N

The responses to these statements may provide a basis for making inferences of the extent to which online teachers can address the cognitive profiles of learners associated with individual neurodivergent sates. Profiles may be associated with working memory capacity and processing speeds as well as learning preference such as the biases dyslexic learners have for visual representation of information.

Contribution of Research

This protocol extends current research by investigating how strategies used by teachers in feedback and assessment for primary and secondary students address the needs of learners with SEN.

Implications of Research

The research protocol is intended to stimulate the interest of researchers interested in online feedback and assessment with respect to earners with SEN in schools. The research purpose that an online questionnaire could form the basis of reviewing how teachers conduct online feedback and assessment and the kinds of strategies they use. It further addresses the benefits of online feedback and assessment, and this may be across SES of learners. This research could be followed by focus interviews of online teachers which may provide an in depth understanding of the weaknesses and strengths of online feedback and assessment in terms of the extent to which the cognitive profiles of students/pupils are met. It is nevertheless envisaged that teachers would apply their knowledge of theories of cognitive and learning styles during feedback and assessment with an emphasis on language acquisition and development of learners. Furthermore, it is expected that examination of online assessment may provide sufficient insight into the processes of this and therefore possibilities for improvement. The merits and weaknesses of the way in which lessons are presented to students/pupils requires examination as more efficient ways are proposed such as an automated and adaptable system addressing which addresses the styles of learners.

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APPENDIX ONE

Research Brief

I am a Fellow of the Society for Education and Training and am a part-time online tutor and am conducting research on assessment and feedback. Names of organisations and individuals or other confidential information will not be used in the research writeup. Instead, pseudonyms will be used to disseminate findings.

All participants are asked to complete ethical approval before the start of an online questionnaire. For some questions, it is possible to make more than one choice. The online questionnaire takes between 5-10 minutes.

It is likely that the research will have potential for the development of New Practices. It is expected that the research will be published in a reputable journal, and this will be emailed to the organisation(s) that took part. The link for the questionnaire is below:-

https://qfreeaccountssjc1.az1.qualtrics.com/jfe/form/SV_bdYDGO4BwFonLCK

APPENDIX TWO

Assessment and Feedback with Online Teaching

Start of Block: Demographic Details

Ethical Consent Form

I understand that my participation is voluntary and that I am free to withdraw without giving any reason.

I agree to take part in this research. I understand that names of the participants and institutions I mention will not be used and they will be replaced by fabricated names.

- ○ I consent

Q1 Which year levels do you teach?

- ☐ Primary: Year 3-4 (1)
- ☐ Primary: Year 5-6 (2)
- ☐ Secondary: Year 7-8 (3)
- ☐ Secondary: Year 9-10 (4)
- ☐ Secondary: Year 11 (5)
- ☐ Post 16: (6)

Q2 Do you teach pupils/students with Special Educational Needs?

- ☐ Dyslexia (1)
- ☐ Autism (2)
- ☐ ADHD (3)
- ☐ Other: (4) _____

Q3 Which subject(s) do you teach using online platform

- ☐ English (1)
- ☐ Maths (2)
- ☐ Science (3)
- ☐ Humanities (4)
- ☐ Languages (5)
- ☐ Other (6) _____

Q4 Do you teach groups?

- ○ Yes (1)
- ○ No (2)

Q5 If you teach groups, how many learners are there in each?

- ☐ 2-3 (1)
- ☐ 3-6 (2)

End of Block: Demographic Details

Start of Block: Assessment Using Online Platform

Q6 How do you assess students' learning?

- ☐ Formative (1)
- ☐ Summative (2)
- ☐ Both (3)

Q7 Do you think assessments benefit students with SEN?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Other: (3) _____

Q8 How does formative assessment benefit pupils/students?

- ☐ Enable pupil/students to identify their learning needs. (1)
- ☐ Provides an opportunity for students to revise topics. (2)
- ☐ Allows teachers to check learners' understanding of topics. (3)
- ☐ Other: (4) _____

Q9 How does summative assessment benefit pupils/students?

- ☐ Helps students to address all their gaps in knowledge. (1)
- ☐ Yes (2)
- ☐ No (3)
- ☐ Somewhat (4)

Q10 Does summative assessment enable teachers to target knowledge gaps of pupils/students?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Somewhat (3)

End of Block: Assessment Using Online Platform

Start of Block: Feedback Using Online Platform

Q11 How do you provide feedback to students?

- ☐ Praise (1)
- ☐ Further explanations (2)
- ☐ Encouraging peer interactions (3)
- ☐ Making suggestions (4)
- ☐ Other (5) _____

Q12 Do you think feedback is helpful to students?

- ☐ Agree (1)
- ☐ Disagree (2)
- ☐ Somewhat (3)

Q13 How are students' feedback after lessons beneficial to you?

- ☐ Not at all beneficial (1)
- ☐ Somewhat beneficial (2)
- ☐ Very beneficial (3)
- ☐ Any other comments? (4)

_____

End of Block: Feedback Using Online Platform

Start of Block: Learning Using Online Platform

Q14 Does learning takes place at each lesson?

- Yes (1)
- No (2)
- Somewhat (3)

Q15 Do you find your teaching platform easy to use?

- Yes (1)
- No (2)
- Somewhat (3)

Q16 Has online platform helped you to improve your teaching?

- Yes (1)
- No (2)

Q17 Do you teach students with Special Education Needs using online platform?

- Yes (1)
- No (2)

Q18 If yes, do you have strategies that enable SEN students to learn?

- Yes (1)
- No (2)

Q19 Please note the strategies you use.

_____

Q20 How do you know students are learning?
_____

End of Block: Learning Using Online Platform