'Think Aloud' Teaching

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Abstract
This paper provides an overview of the first year of a research project investigating the concept of think aloud teaching. Most research into think aloud teaching so far has focussed on language learning, but this project explores the viability of extending this style of teaching into a broader range of disciplines. In brief, think aloud teaching is where the tutor completes a task live in front of students, who will be privy to the thoughts and decisions of the tutor as they are spoken aloud. The major benefits are expected to be for students new to Higher Education. They will participate in a style of teaching and learning in which the barriers between tutor and students are broken down by creating an environment in which tutor and student alike will complete identical tasks. The tutor is seen as a knowledgeable guide who has explored certain terrain before - but not better than - the students, and is now leading them on a joint journey. Some conclusions based on the primary and secondary research are drawn, and – most importantly – recommendations for future research are included. In brief, there is a strong case to be made for considering the use of think aloud teaching in a wider range of disciplines, but more feedback from students is required.

Introduction
Several years ago I taught classes in aural summary writing. My final year students of German were assessed in their ability to comprehend 8 to 10 minutes of spoken German (around 1,300 – 1,500 words) and to condense what they had heard into a written summary in English of around 250 – 300 words. In order to provide guidance and examples, I ran several classes every year as think aloud sessions. This would involve my assuming the role of a student, in which I would produce my own summary live based on a previous year’s examination text. Since we had a language laboratory equipped with headphones, I was able to switch between letting the students hear the spoken text in small sections and my own think aloud protocol. I would elaborate on the comprehension problems I was facing, and discuss the decisions I was taking. I would review what to include and exclude from my summary. Additionally, I passed on general tips and any strategies I had developed over the years. (There is a sample transcript in Appendix 1 below). This spoken input was supplemented with my handwritten
notes that the students could all see via a document camera. After the class I would then write up a finished version for posting on our VLE (Moodle).

Since the students responded well to these classes, I started to compile a list of the beneficial features – as I saw them – of this type of class. These benefits included the following:

• Students would hear the decisions that I took and understand the reasons that I had for making them.

• Students would see the links between those decisions and the finished product (in this case, a written summary).

• I could devote some of my think aloud comments to highlighting the relationship between what I was doing and our marking criteria. This quickly established links between the task that I was undertaking, the assessment that the students would be set, and the ways in which their performance would then be judged.

• There was a beneficial impact on working as a group. Since students could see me performing exactly the same tasks that I was expecting of them, there was a greater sense of all of us working together as practitioners rather than seeing me as a taskmaster.

• Our discussions as a group became less vague. It was no longer a question of students asking what I would do if a text contained a certain feature. Instead, they could ask about that feature in an actual text, and ask me about my actual approach to tackling it.

Encouraged by these positive experiences, I decided to explore the field of think aloud teaching further with a view to seeing whether it could be expanded into other areas.

Review of Previous Work in the Area of Think Aloud Teaching

Previous research into the uses of think aloud protocols in the classroom is divided into two main areas. On the one hand, students can be encouraged to voice their own thoughts whilst completing various activities, and this process will afford their tutor an insight into their approaches to a particular task as well as any difficulties they are facing. For example, Abas and Aziz (2016) undertook a study of EFL students:
"In this study, the think aloud protocol has been found to be a good data collection technique to obtain verbalized reactions towards the task at hand, that is, writing a composition. The writing process was described by the participants while writing the composition assigned." (176)

At the end of this study, the researchers had gained a much fuller understanding of how their students were approaching their tasks, and could react accordingly. For them, the use of think aloud protocols in the classroom functions as a highly effective diagnostic tool, allowing them a detailed and otherwise unobtainable insight into the step-by-step process by which a student completes a piece of academic writing in a foreign language. (See also Cowan, 2017 for a good overview of using think aloud techniques as a diagnostic tool.)

On the other hand, there are those teachers (such as myself) who focus on the benefits of the tutor – rather than the student – producing a think aloud protocol during their teaching. Within this category, it has been interesting to note that most of the research has taken place in two areas, namely the teaching of reading, and the teaching of translation. I would argue that the bulk of this research has been very positive, and has revealed several beneficial outcomes that I would like to group together under the following categories: student-tutor relationship; level of engagement; lasting impact.

**Student-tutor relationship**
The very nature of a think aloud teaching session creates a framework in which the tutor works on the same (or a very similar) task to the students; in my own case delivering a think aloud protocol whilst producing a written summary of a particular text. Davey (1983) describes this process as students seeing "a mind responding to a specific passage" (45). This has a direct influence on the ways in which students regard their tutor for several reasons. Firstly, students will be reminded that their tutor is not just someone who can teach but also someone who can do. Secondly, there is a strong element of democratisation since the tutor positions himself or herself in the role of the student. This problem of the expert status of a tutor has been well explored by Mouskatim (2007), who reveals that his students view him "as an 'authority', a perception that I feel gets in the way of their meaningful involvement in critical dialogue" (212). For Mouskatim, it therefore becomes vital to develop "a democratic relationship between me and my students" (217). I would like to
argue that this sense of equality is strengthened through a think aloud teaching session since this will deliberately dwell on any problems or obstacles, rather than ignoring them, meaning that students are reassured when even an expert practitioner admits to encountering barriers to progression on a particular task. Thirdly, a think aloud teaching session can easily involve students as co-producers of work. Li (2011) investigated the use of think aloud teaching in translation classes, demonstrating how jointly produced translations (from English into Chinese) generated numerous benefits for a group of learners:

"This 'joint-translating' mode will not only help to develop students' critical thinking and stimulate the bi-directional exchange, but also enhance the student-teacher relationship."

(119)

Not only does this contribute to the feeling of democracy highlighted above, it can also act as an induction into a peer group situation where students’ own suggestions and solutions will be valued explicitly through their incorporation into the finished product, whether that be a summary, a critical commentary, or other piece of work.

Level of engagement
Research into think aloud teaching has made it clear that students can feel more motivated during these types of sessions. Block and Israel (2004), for example, carried out research into the teaching of reading and discovered that not only do students achieve greater understanding through the use of think aloud teaching, they also obtain more pleasure (167). Ortlieb and Norris (2012) also worked on the use of think aloud sessions to teach reading, and noted that "students appeared engaged more than usual during the think aloud sessions" (6). Finally, Li’s previously discussed study of the use of think aloud teaching in translation classes identifies it as a route to creating interactive teaching (2011: 113). It is my view that any style of teaching that can result in greater pleasure for students, higher levels of engagement, as well as interactivity, deserves to be employed more broadly.

Lasting impact
The final benefit that has been highlighted by previous research is that learners are better able to retain what they have learnt during exposure to think aloud teaching. Ortlieb and Norris suggest that the reason for this is that, instead of merely learning facts or examples, students are actually acquiring a set of techniques that they can then
apply for themselves:

"The goal of the think aloud strategy is that eventually students will develop a similar thinking process when they are reading independently, thereby improving their comprehension." (2012: 2)

Block and Israel concur, concluding that: "Students will also experience the benefits of think alouds long after they leave the classroom" (2004: 167). This lasting impact was also crucial for my own aims, since I was preparing students for an assessed task and wanted them to take their newly-acquired techniques into the examination room.

These research findings give a clear indication that a think aloud teaching style can have a major beneficial impact on the student experience in the classroom, through a greater sense of integration, heightened engagement, and long-lasting influence. Encouraged by these results, I decided to develop my own project that give me the chance to explore whether think aloud teaching could have broader applications.

The Project
As a first step, I presented my initial ideas at the 2016 Festival of Learning & Teaching at Manchester Met, where they were well received. I then applied for, and received, funding via a Scholarship of Teaching & Learning grant awarded from CELT for the Academic Year 2017-2018. My major goal for this project was to explore the viability of extending this style of teaching into a broader range of disciplines. I decided to base my trial in one of our large Foundation Year units, 'Introduction to Language, Culture and Linguistics', where I am the Unit Leader. This unit seemed ideal since it is introductory in nature, and covers broad ground in its subject matter. Additionally, the coursework assessment of this unit is via a portfolio of two critical commentaries: one on a political speech and one on a newspaper article. This critical commentary was chosen as the basis for my research project, since this assessment is designed to test our students' ability to read critically and interpret style effectively. These two skills have strong links to the areas where think aloud teaching has already been identified as effective (reading / translating).

I devoted two particular classes to the project, one in Term 1 and one in Term 2. During these classes I employed a think aloud approach to tackle two assignments from previous years (one newspaper
article and one political speech). This gave me the opportunity to demonstrate how I undertake this kind of task, making sure to explicitly articulate my decision-making process (see Appendix 2 for a sample transcript of my think aloud protocol). Both of these sessions were followed up by opportunities for our students to undertake very similar tasks: a mock assignment in Term 1, and then the genuine assignment in Term 2. Another benefit is that this style of teaching lends itself perfectly to the creation of podcasts that can be made available to students who miss classes, and for revision purposes. Indeed, creating an additional session would also have the benefit of providing a 'cover class' in the event of a tutor being unexpectedly unable to attend.

I surveyed all the students who attended these two sessions to gather their views. These questionnaires used open questioning to allow students to represent their own views in an unconstrained fashion (see Appendix 3 for a full copy of the questionnaire). This was intended as an attempt to involve students as far as possible in the project, since previous research has shown that making students part of the research process can lead to better results (Arhar and Buck, 2000). Unfortunately, in spite of this, returns of my questionnaires was very low. Out of 40 students, 8 returned the questionnaire in November 2017. Out of 44 students, 1 returned the questionnaire in February 2018. These returns are too low to allow any conclusions to be drawn. However, it was good to see that students did use key words in their responses (analysis, critical, structure) in Section B of the questionnaire, which focussed on understanding of the requirements for producing good assessed work.

A review of the responses to the questionnaires reveals a great deal of overlap with previous research outcomes that highlighted the student-tutor relationship, level of engagement, and lasting impact. Looking at the responses that commented on the student-tutor relationship, it was clear that this style of teaching contributed to the atmosphere in the sessions in a positive way, with students writing "creates a more informal feel which is more enjoyable" or feeling "comfort with the professor". The think aloud approach was also judged to be "more interactive", with one student responding, "I feel more engaged because I’m not just listening to a stream of general info". Another student appreciated the fact that there is "more detail told to us whilst going through what we’re studying", highlighting the explicit link to a genuine task. Finally, one student commented on the outcome beyond that particular session, writing: "I now understand how to approach a text and the level of analysis expected". Overall,
although the number of completed questionnaires was small, it was
clear that the reactions to think aloud teaching captured here did map
onto previous findings and do also provide further evidence of the
value of this type of delivery.

Conclusions and Recommendations
Having undertaken this project, reviewed the relevant secondary
literature, and considered the responses of our students, it is clear
that think aloud teaching has good potential to improve the student
experience in a number of areas. In addition to the key areas of the
student-tutor relationship, level of engagement, and lasting impact,
identified by previous research, I would propose that think aloud
teaching can provide added value as follows:

• As an explicit example of “this is how we do things at university”, it
can help new students manage the transition from school / college
to HE, and ensure that assessment marking criteria are readily
understood.

• It is in the very nature of the think aloud experience that students
will perceive the passion of their tutors for their subject in a
completely unfiltered manner.

However, given the low number of returns to my survey there is a real
opportunity for future research into this field to add substantially to
the evidence base. Ideally, this would mean surveying students who
are drawn from a broader range of disciplines, and who are exposed
to a greater variety of assessment tasks. I remain confident that this
additional evidence will also support the desirability of promoting this
style of teaching more widely.

Appendix 1: Transcript
(Partial transcript of a think aloud summary class)

OK. Here we are at the very beginning of the recording. I think
the beginning of a recording can often be a mine of very useful
information. For example, there might actually be a title or maybe
if there’s an interviewer then he or she might actually say what the
interview’s about. More usefully, even, tell us what the key questions
are going to be that they’re going to be posing. Or perhaps divide
their little report into different sections. Unfortunately, that’s not
the case here. Nonetheless, this opening section does give us a
lot of information. What sort of things am I flagging up? (NB: on
my handwritten notes that the students can see via the document camera) Well, something about 18 months ago, so we’re going to learn something about 18 months ago. We’ll hear that again, obviously, in a minute. In Boston as well. Locations are also very important things. Then there was this guy’s name. Jed Mardisch … Mordisch … Jett … Jatt. I’m never going to spell that to be honest. Do I need to? No. Obviously, I can just refer to him as the scientist. He was referred to as a Mediziner. But I think scientist is fine. Medical scientist, maybe. I’ve also learnt that … something about 10,000 members. But the important thing is this was 18 months ago. Now, judging from the way it’s structured I get the feeling that it’s going to, you know, that number is going to have increased because we’re going to hear about how Research Gate has grown up. So we’ll listen on a bit and see if I’m right.

Appendix 2: Transcript
(Partial transcript of a think aloud class for the Foundation Year unit 'Introduction to Language, Culture and Linguistics' in 2017-2018)

From a stylistic point of view he ends with what? He ends this paragraph beginning with 'I'. And yet he then diverts attention away from 'I' to 'the people' which is, you know, clearly the electorate. And he ends with an image. It’s not been, you know, stuffed full of images. But there have been some strong ones. And the first one we picked up on was an image of light. Do you remember? This notion of a beacon. And here how does he end? Again with this notion of light. Of America as having this potential to shine that light more strongly. So what sort of things would I want to dwell on then when I come to write my commentary? I think, personally, this use of the personal pronouns. Very interesting! The use of the individual and individual family history as representative of the history of a nation. The journey that he takes from America as this great place to a place that’s still in need of attention, still in need of political intervention. And I think, you know obviously, there’s this sense of, you know, quite a subtle sense of imagery, this notion of the light, the beacon. Looking at it from a language point of view …

Appendix 3: Questionnaire
(Copy of the questionnaire issued to students taking the Foundation Year unit 'Introduction to Language, Culture and Linguistics' in 2017-2018)

Please answers the following questions as fully as you can. This is a genuine opportunity to influence the ways in which you are taught here.
**Section A (Term 1)**
Did you notice any differences and / or similarities between the teaching in this class, and the styles of teaching that you are used to?

If so, can you make a list of the top three differences / similarities?

Please comment on how these differences / similarities have affected your enjoyment of this class.

**Section B**
This lesson covered producing a commentary, which will be part of your assessment.

How has this lesson affected your understanding of what the task involves?

Please list the key things that you believe your teachers will be looking out for in your own work.

What would you now say are the top three things needed to do well in this assessment?

Please describe your own feelings now towards tackling this assessment for yourself.

**Section C**
How would you rate your own understanding of the assessed task now?

List any areas that you feel were not covered in this class.

Would you look forward to this type of class again in the future?

Can you think of any ways in which this style of teaching could be improved?
Section D (Term 2)
Did you fill in a survey questionnaire in Term 1?

If you answered NO, then please go to Section D1

If you answered YES, then please go to Section D2

Section D1
Did you notice any differences and / or similarities between the teaching in this class, and the styles of teaching that you are used to?

If so, can you make a list of the top three differences / similarities?

Please comment on how these differences / similarities have affected your enjoyment of this class.

This lesson covered producing a commentary, which will be part of your assessment.

How has this lesson affected your understanding of what the task involves?

Please list the key things that you believe your teachers will be looking out for in your own work.

What would you now say are the top three things needed to do well in this assessment?

Please describe your own feelings now towards tackling this assessment for yourself.

How would you rate your own understanding of the assessed task now?

List any areas that you feel were not covered in this class.

Would you look forward to this type of class again in the future?

Can you think of any ways in which this style of teaching could be improved?

Now go on to Section D2.
Section D2

You wrote a mock assessed commentary in Term 1, and are working on the real assessment now.

How well do you understand the task now?

Can you list your top tips for how to do well in this assessment?

Can you describe the common mistakes that need to be avoided with this type of task?

Is there anything else that would have helped you prepare for this task?

Many thanks for participating in this survey!

References


