

POLICY, PRACTICE AND RESEARCH

Learning through Dialogue

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For it is the greatest truth of our age: information is not knowledge.....

(Caleb Carr: Killing Time)

In the late 1970s, while working as an EFL teacher, the organisation that employed me sent me to their Leeds school for a week to 'cover' for a colleague. One afternoon I taught a group of young Libyan electricians their English for Science and Technology class. They were working from a textbook and had reached the point in their course where the aim was to learn the vocabulary associated with the area of circles and the volume of cylinders. Of course the assumption was that the students already knew how to carry out the operations and were learning the English vocabulary and structures that corresponded to those in Arabic they already knew. However, it soon became apparent that they did not know the mathematical content. Accordingly I set about teaching them how to do the calculations rather than teaching them the textbook language lesson. By the end of the lesson they could calculate areas and volumes and thanked me because they said that they had never really understood this before. Feeling a little bit guilty because I was supposed to be teaching English and not maths, I reassured myself that in fact they had learnt the target vocabulary and structures in English as well. Furthermore, I was later informed that they were generally perceived to be a rather unmotivated group of students who rarely showed much enthusiasm.

It was not until a few years later when I was working in a secondary school that I reflected more fully on this experience and realised that in some ways it was a good language learning lesson because it involved content that was important and motivating to the students. This may seem fairly obvious today, but at the time a lot of EFL and ESL was taught in a disembedded way or contextualised in fairly meaningless or arbitrary situations. The message then was that curriculum content could be a convenient and useful context for learning English as an additional language. What also emerged, as mainstreaming and collaborative teaching became more widespread though the 1980s was that some class teachers began to say that the curriculum based oracy activities and materials designed first and foremost to meet the needs of developing bilingual pupils were good for all pupils. The implication was that language conscious content

materials were functioning as language learning tasks but were also functioning in some way as more effective content learning tasks. This raised the question of how oracy activities were helping to develop children's understanding of concepts and information. Put more broadly this became a question of the relationship between language and cognition.

Of course this was not a new question, but in the years following the Bullock Report (1975), it became an issue of more practical pedagogical concern rather than just theoretical interest. Discussion of the nature of language and learning was a significant feature of the Bullock Report and highlighted the pioneering thinking and research work of Barnes and others.

Barnes (1971) had already made the point that:

It is not that there is too much language, but that it is not fulfilling its functions as an instrument of learning. Rather, language is seen as an instrument of teaching. (his italics)

(Barnes, 1971, p66)

Barnes' comment about language points out that language was then, and surely still is, often seen as a kind of overwhelming barrier to learning. Barnes was commenting on the way in which the process of teaching and learning was interpreted as one involving transmission and reception. That is to say that the operational metaphor was of 'filling up vessels' with knowledge. The actual practice of transmissional teaching therefore necessarily involved the use of the traditional lecture, questions, notes and worksheets or in other words ways of delivering curriculum content and checking that the message had been received. A problem was of course that this transmission process did not always seem efficient for all students. In fact it put heavy demands on both listening and reading skills, and students who were not successful were seen as unmotivated, feckless, inattentive or less able. The predominant form of classroom dialogue in transmissional teaching was the three part *Initiation - Response - Feedback* exchange in which typically a teacher asked a question, a pupil responded and the teacher evaluated the response.

Teacher: When was the Battle of Hastings?

Pupil: 1066

Teacher: Good girl / boy!

Typically the pupil response was elliptic and the evaluation of the answer often sounded like an expression of the worth of the pupil.¹ Even when the question seemed to require more than a single word answer pupils often attempted to keep their response as economical as possible.

¹ . A few years ago, a Travellers' Team Teacher told me that one of her 'targeted' pupils had said to her, "If I get an answer wrong, does that mean I'm not good?"

Teacher: Why did the Spanish land on the coast of Mexico?

Pupil: Gold.

Teacher: Yes, they were searching for gold.

From the pupil perspective language was being used to show that they knew or understood something or that they had been paying attention. Even where the intention of the teacher in asking a question was to get pupils to think or reflect it was likely that pupil interpreted the question as a test.

Barnes' alternative to the predominance of transmissional teaching was to propose the use of small group work which would allow pupils to engage in purposeful talk with each other about curriculum content. Barnes was clear that this was not suggesting that any form of verbal interaction amongst pupils was effective in promoting learning but that the extent to which the talk was 'exploratory' in nature was significant. Barnes proposed that this 'exploratory' talk could be developed through exploiting the possibilities of small- group tasks which obliged students to use talk in order to achieve a particular goal. Despite the impetus given to 'Language across the Curriculum' by Bullock and subsequent projects, policies and publications, the realisation of classroom practice which put children's talk at the centre of the learning process was limited in scope or in extent. This is not to deny the existence of some fine examples of 'talking to learn' classrooms, but to suggest that the insights contained in Bullock and other publications were not incorporated into general mainstream practice. The pressure during the 1980s to conform to more traditional methods and forms of classroom organisation and the advent of the National Curriculum both served to persuade many teachers that 'group work' was out of favour and that the need to cover NC content meant that there was no time to do 'language work'.

In the last thirty years, the traditional appearance of transmissional teaching may have declined, but to a considerable extent it still seems that the underlying notion of transmission is still with us, albeit in different guises. Expressions which imply a transfer of knowledge from teacher to pupil, such as 'getting it over' or 'getting it across' are still commonly used to describe or evaluate a teacher's ability to teach. This observation is not intended to deny the need to present and explain all kinds of information or to belittle the considerable skills that many teachers possess in doing these things, but to suggest that however sophisticated and skilful a presentation is, it does not necessarily ensure that learning is efficient or effective. What then is required if learning is to be more effective?

Perhaps some of the practical interpretations of 'talk' and 'group work' that emerged during the late 1970s and the 1980s did not help to establish oracy as a tool for learning. For some teachers the message that talk is good meant that any talk between pupils was seen as positive and similarly that seating pupils in groups was

beneficial. When combined, it meant that group work could often involve pupils in sitting together but doing individual tasks accompanied by inconsequential chat.

One difficulty with this idea is that opportunity to participate in a small group does not necessarily lead to the use of exploratory talk. In other words, putting students together in a group can lead to monosyllabic near silence, off task chat or dogmatic assertion and counter assertion. The opportunity to talk to each other may not be enough to ensure that the talk that results contributes to the students' understanding even when the talk is largely on task. The implication is that some kinds of talk are more useful than others in supporting learning.

Terry Philips (1985) proposes that there are five modes of 'on task' talk evident in classrooms. They are the operational, the argumentative, the expository, the experiential and the hypothetical.

The operational mode he suggests is the kind of talk that accompanies action such as the carrying out of a practical science experiment. This kind of talk is relatively inexplicit and relies heavily on the use of pronouns such as 'it' and 'them', general nouns such as 'thing' or 'ones' and adverbs such as 'here' and 'there' and is therefore the kind of talk which is difficult to make sense of unless you can also see what is happening.

The argumentative mode is as the name suggests one in which assertion and counter assertion predominate, but where justifications are usually inexplicit or become of the "Because I say so" kind.

The expository mode is one in which the students (or some of them) begin to replicate the kind of teacher-student discourse common when a teacher addresses a whole class. That is to say that one of the students may adopt a role in which they explain to others and direct questions to them. I have even heard students adopting this role in a small group begin to use typical teacher responses such as 'good girl' or 'well done' when others in the group contribute.

The experiential mode is a mode in which students draw on their own experience and offer anecdotes, memories and other snippets of information which they see as relevant to the topic. Typically students may say things such as "I remember when I was young seeing this...." or "My mum told me that..." or "In India I saw this...".

The hypothetical mode is the kind of discourse in which students put forward ideas in a tentative manner. These ideas are often expressed using terms such as "It could mean that...." or "It might be..." or "Perhaps it was used for...." Philips suggests that this is a process of putting ideas on the table for consideration by others and invites responses and elaboration. This differentiates it from the argumentative mode in that it

encourages justification and the clarifying and shaping of ideas rather than dogmatic assertion.

Philips maintains that it is the latter two modes, 'experiential' and 'hypothetical', which are the most useful in facilitating pupils' learning. This is because these two modes offer the greatest opportunity for pupils to reflect on their own experience and integrate it with the 'new' knowledge they are seeking to make sense of.

Mercer (2000) classifies dialogue into three categories. He adopts Barnes' notion of 'exploratory' talk and distinguishes this kind of talk from other kinds of by proposing that some dialogue is 'disputational' in nature. In many ways this is a similar distinction to the one that Philips makes between his 'hypothetical' and 'argumentative' modes. However, Mercer's third category is 'cumulative' dialogue in which participants use talk to reinforce and support each other's ideas. The dialogue is cumulative in the sense that each utterance builds on previous ones in an unquestioning manner. Not surprisingly Mercer suggests that it is exploratory talk which offers the most scope for children to develop their understanding of content.

This raises questions about the nature of cognition. Richardson (1999) argues that intelligence has evolved as a result of the need to be able to make predictions in a world of changing circumstances and complex relationships, combined with the requirements of maintaining the social cohesion of human co-operation. Accordingly, he suggests that cognition is concerned with developing cognitive structures that incorporate covariance at ever increasing levels of depth and complexity. He gives the example of how early humans would need to be able to predict the location of food, but how the presence or absence of food in a particular place might depend on the season. In this case the covariant is the time of year. This example of course hints at the possible number of other covariants which could interact with place and season to affect the accuracy of prediction about the presence of food.

In a modern context the interaction of covariants on the possible outcome of an event can be seen in people's prediction of the result of a football match. Putting aside the possibility that allegiance to one team might affect a prediction (wishful thinking) for the football fan the prediction might take into account a considerable number of interacting covariants such as:

Team selection
Injuries and suspensions of players
Team formation and tactics
Weather conditions and the state of the pitch
Which team is playing at home

Transmissional

The stage of the season
The motivation of the teams to win (avoiding relegation etc.)
And so on

For the football fan this awareness of covariance is built up through watching matches and perhaps more importantly being involved in various kinds of dialogue about what they have seen. These dialogues serve to make explicit and analyse the pivotal circumstances and incidents which affected the outcome. What is also likely is that there will be speculation about events that did not happen ("If he had brought Beckham on then...") and how these may have altered the course of events.

What is happening is that the dialogue about a particular match is making explicit the covariants and the interactions between them and establishing a mental structure or schema of covariance at a more general level than that of a particular match. This schema can then be operationalised to analyse and predict the outcome of the next match. Experience of more matches and more dialogues will potentially deepen and refine the covariant schema with the possibility that the person becomes more able to predict outcomes more accurately.

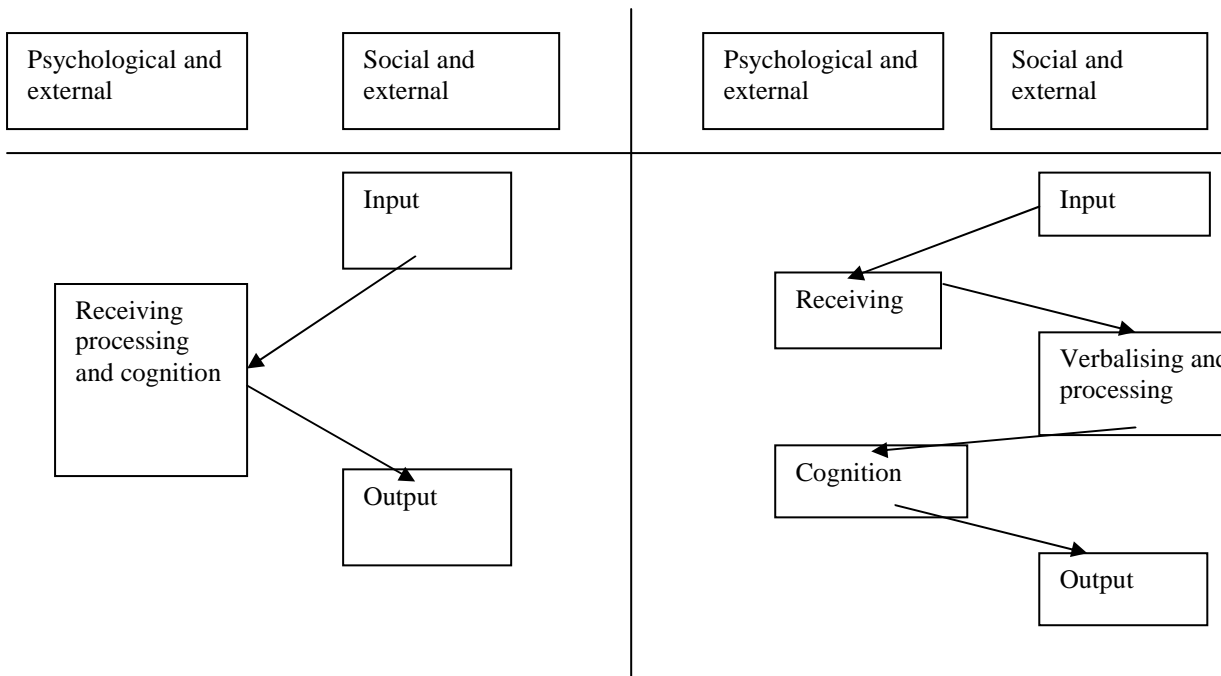
This is essentially a view based on Vygotsky's theories of cognitive development. In summarising Vygotsky's view Wood (1998) says:

'.. social interaction and such experiences as talking to, informing, explaining, being talked to, being informed and having things explained structure not only the child's immediate activities but also help to form the processes of reasoning and learning themselves. The child inherits not only 'local knowledge' about given tasks but, gradually internalises the *instructional process* (his italics) itself. Thus he learns how to learn reason and regulate his own physical and mental activities.'

(Wood, 1998, p165)

This brings us back to the relative failure of transmissional teaching to be effective. It seems to me that transmissional teaching misses out a step which limits pupils' opportunities to process content. The assumption is that pupils can process information efficiently at a purely internal psychological level. Exploratory talk allows the processing to switch between the individual and the collective, the social and the psychological and the verbal and the cognitive. The opportunity to think aloud, test out ideas and share and compare understandings allows pupils to think through and become more aware of the structure of the knowledge they are dealing with.

Exploratory



*Input might include: teacher presentation / explanation, reading text, video, practical work etc.
 Output might include: oral report, writing, worksheet, diagram construction / completion etc.*

Hence transmissional teaching may be efficient for the learning or memorising of information and procedures, but less efficient for developing pupils' capacity to generalise and apply knowledge.

I have already suggested that exploratory talk helps to make explicit the covariants operating in a situation. What is also significant about the social nature of the talk is the degree of contextualisation that results from the dialogue. Mercer makes the point that the process of a dialogue involves the building of a shared context or common knowledge amongst the participants. Part of this process of contextualising may involve seeking clarification and checking understanding through asking questions, paraphrasing, summarising and so on. Another part of building 'common knowledge' may relate to Philip's experiential mode, in the sense that participants may use anecdotes, memories and other parts of their experience to illustrate a point they are making. In this way they are not only helping to create a shared context but also connecting their existing knowledge and experience with the new knowledge. In transmissional teaching the teacher's control of classroom talk can mean that the context is largely of the teacher's own making and is therefore not necessarily shared. In the same way the pupils' opportunities to offer and test the relevance of their experiences may be somewhat limited.

Having considered how exploratory talk can enable pupils to develop their understanding, it is perhaps useful to examine what features might distinguish 'exploratory' or 'hypothetical' talk from other kinds of dialogue,

Mercer (2000) explains how he and his colleagues used a computer programme to analyse the occurrence of the following words and phrases in a sample of dialogues of different types.

because, if, why, I think,

The hypothesis was that exploratory talk would contain relatively more use of these items than disputational or cumulative talk. Their analysis did suggest that this was the case.

It also seems reasonable to assume that exploratory talk will also have a higher than usual occurrence of speculative questions and also various expressions of modality, and in particular modal verbs. If these are some linguistic features of exploratory talk, it remains to be seen why this kind of talk should be effective in facilitating learning.

Given that knowledge is developed by generalising and forming knowledge structures or schemas from specific situations and that it is the process of making explicit the covariants operating in a situation it is not surprising that *if, because, why* and expressions of modality are important linguistic elements of exploratory talk. The covariants will be made explicit by language structures which express notions of cause and effect, reason and consequence, possibility, ability and logical relations all of which are typically (although not exclusively) realised through items such as *if, because* and modal verbs.

In order to examine this idea I recorded a group of four Year 4 pupils carrying out a group task about Anglo-Saxon settlement. The group consisted of K, a girl of African-Caribbean heritage, A, a male Gujarati speaker of Indian Muslim heritage and J and S who are both Panjabi speaking boys of Indian Sikh heritage. S arrived at the school in Year 3 without any experience of using English and has made good progress in acquiring English. He took a full part in the activity and contributed a number of points. His contributions to the examples given below are asterisked. They show that despite struggling to for vocabulary and for control of grammatical structures he is motivated to and able to express a viewpoint.

Prior to this task the children had been in different groups and had been rating five different locations on a stylised map according to given criteria. They had scored the locations on a scale of one to five for each of these criteria:

- Nearness to supplies of water
- Nearness to supplies of wood
- How dry the ground was
- Nearness to good farming land
- How easy it was to defend against attackers

This group were now comparing their ratings to see to what extent they agreed or disagreed with each other. They also went on to examine whether there was a better location than the five that were given on the map. (We had deliberately not included what would generally be regarded as the optimum location as one of the five on the map).

What emerges from the recording is that there is a significant use of *because*, *if* and also *what if* questions. There is also the anticipated use of modality.

If the attackers are coming they are able to see and they are able to roll rocks down the hill

Because the water rises and goes down and the soil gets fresh, it would be easier for the plants to grow better

They'll have to go down the hill – they might not get the water up there because it's too heavy.

They could have made a kind of track with a cart like thing and made it go down to the stream.

** If they build a house there and they burn it from there the people will go there, there, there – they can run out of the forest.*

**The stones aren't there – they need to scratch them and some stones don't make fire-only some stones make fire.*

They can make this kind of route that twirls and goes round and goes to the river and they can get the water and go back up by the route.

What if like there's some traders- people in boats coming around and they get stuck because of the rocks?

Perhaps because of the nature of the task and the way in which the children approached it, there was little or no use of 'why' questions. The fact that the children were, without prompting, justifying their ratings perhaps meant that there was little need for the participants to elicit reasons from each other.

What is also evident from the recording is that the dialogue effectively enables the children to explore the possible interactions between the factors instead of treating each one as an isolated good or bad variable.

This is indicated by the way the dialogue explores how the river is potentially:

- A source of fresh water
- A means of transport
- A threat if it were to flood
- A barrier making transporting wood, stone etc. difficult
- A means of escape from enemies
- A trap if attacked by enemies and pushed towards the river
- A threat if enemies attacked by boat
- A defensive barrier if enemies approached from the opposite side
- A source of enrichment to farming land if it were to flood and leave behind fertile deposits.

This seems to me to be evidence that the children were beginning to engage with a good deal of complexity and that it is the process of 'exploratory talk' which enables them to uncover it and also handle it without being overwhelmed. Indeed the conclusion of the discussion was that they chose the 'ideal location' which we had removed from the original map. They could perhaps have come to the right answer anyway, particularly if we had included the right answer as one of the five original locations, but it seems unlikely that they would have developed the same degree of principled understanding.

What is difficult to determine is what the process of dialogue led to in terms of developing the children's individual cognitive capacity. Does this kind of experience lead to the integrating of covariants at a more general level into their individual cognitive schema? Will their ability to carry out this task collaboratively enable them to carry out similar evaluation / decision making tasks individually in the future? Mercer (2000) offers some evidence from his own research which suggests that experience of exploratory talk may have beneficial effects on cognition. He tested two groups of children using a non-verbal reasoning test. One group then participated in a series of structured programme of 'talking for learning' lessons, whilst the other group did not. After the course was finished both groups were re-tested. The 'talk group' had improved their scores on non verbal reasoning whereas there was no significant difference in the control group.

It is also worth asking whether such exploratory talk activities develop pupils' ability to express their understanding in a less contextualised setting such as writing a report or evaluation. Gibbons (2002) makes the point that pupils need to move from the more context bound oral reports of what they observed and concluded, to the more context free written reports for which the audience may be distanced and unaware of the joint context. Gibbons points out that this is a process of using more explicit language to make meaning more explicit and less dependent on a shared context. Earlier, I made the point that thinking is

developed by using talk to make causes, reasons or defining criteria more explicit. However, I think that we are dealing with two different kinds of explicitness here. On the one hand, in the example I gave, it is making meaning explicit within a shared context. Gibbons is talking about meaning being made explicit in order to communicate to an audience who don't necessarily share the context of the activity. It seems to me that the first kind of explicitness can result from pupil-pupil interaction but that the second kind can rarely be generated by such interaction. As Gibbons argues it is through the 'micro scaffolding' of teacher – pupil dialogue that children can be enabled to achieve the kind of explicitness that will communicate clearly to a distant audience. In other words small group interaction may enable pupils to develop their own understanding, but not necessarily their ability to communicate that understanding outside the immediate context. However, without the experience of exploratory talk in which they verbalise underlying reasons, causes and criteria and make them explicit to themselves, it seems likely that pupils will have difficulty communicating these ideas to others.

The idea of being articulate is usually associated with being a good communicator. Perhaps we need to extend the definition of articulate to include the ability to use language to generate and explore ideas. I think that we are all aware of bilingual pupils who seem to have reached a 'plateau' in terms of acquiring English. It is almost that they have reached 'saturation' point and that continued English language teaching has little effect. Perhaps this is due to a lack of articulacy and that in order to move on, these children need to be helped to make optimum use of the English they already know. This perhaps suggests that this development of articulacy needs to take place initially through the medium of children's first languages. S the Year 4 pupil mentioned above had had experience of formal education and literacy in Panjabi prior to coming to England. This amounts to what Stephen Krashen referred to (at a NALDIC conference in June 2003) as 'de facto bilingual education'. That is to say that S has received sustained and apparently effective teaching through Panjabi for the first two years of his formal education and now can use his articulacy to make the best use of his limited but growing knowledge of English. This in turn gives him greater access to comprehensible input in English and curriculum content.

Even if it proves impractical to provide L1 'talk' programmes, bilingual pupils can benefit from structured tasks which are catalysts for dialogue in English. Many of our pupils may be fluent but relatively inarticulate users of English. What is worrying is that their experience in school is often not helping them to become more articulate because they do not have real opportunities to participate in sustained dialogue which has the characteristics of Barnes' or Mercers 'exploratory' talk or Philip's 'hypothetical' mode. Without dialogue and with only the pseudo dialogue of most whole class discussions, any amount of courses in thinking skills, study skills or

learning skills are unlikely to raise attainment significantly. Cummins (1996) points out that:

Our economy increasingly requires people with symbolic analysis skills who are capable of collaborative critical inquiry, but we still insist that schools get back to basics" (as though they ever left).

(Cummins, 1996, p 233)

With dialogue about content that is of interest and concern to pupils, the curriculum could prove to be fertile ground for improving pupils thinking, language and learning. Above all, it may increase children's capacity to learn to learn.

This is perhaps why the best of EAL practice over the years has been perceived as 'good for all pupils' This good practice has enabled not only pupils using EAL to learn English but also enabled them and their monolingual peers to become more articulate users of language, which in turn has resulted in greater understanding of curriculum content for all pupils.

Perhaps also, the lesson I should have learnt from teaching the Libyan electricians was that it was their desire to engage in dialogue and their ability to do this which enabled them to learn the language and the content. They were asking the right questions: all I had to do was to answer them. If only it was always that simple.

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