Using talk in classrooms: constructing meaning[1]

Marie Quinn

In any discussion of Timor-Leste's development over the last ten years, the issue cited most often would arguably be the language situation: the interplay of official languages, working languages and national languages that operate in the public lives of Timorese see (Taylor-Leech 2008, 2009; Bowden & Hajek 2007; Quinn 2007, 2008). Indeed, in the area of formal education, the advice and policy concerning the language of instruction has shifted over the years since 2002 in relation to Portuguese, Tetum and other languages. The new Basic Law of Education (2008: Law 14/2008: article 8), states 'The teaching languages of the Timorese education system are Tetum and Portuguese'.

However, to centre discussion of education merely on which language that teachers and students use detracts from more fundamental problems about teaching and learning. In examining data collected from Grade 5 and 6 Timorese classrooms, three problems are observed across all settings[2]. These are:

- teachers do not use Portuguese proficiently;
- teachers do not understand sufficiently the content that they are teaching; and
- teachers do not know how to use talk effectively to construct meaning

This paper will concentrate largely on the final problem since this underpins the basic objective of teaching: to ensure that students learn. Examples of classroom events will explore what practices teachers use to teach. The paper will suggest alternative strategies that could be implemented across all curriculum areas and across all languages to provide richer opportunities for students to learn.

Rationale for examining learning

The imperative for examining how students learn in Timorese classrooms is highlighted by indicators that students are not achieving the learning standards set by the State. Rates of student retention/repetition from the Ministry of Education's own database Educational Management Information System (EMIS) for 2006/7[3] show that many students are not learning enough to progress through school. Data for 2006/7 show that 14% of children in primary school repeated a grade level. A further 11% of children attending primary school dropped out during that year. Since similar patterns exist in data prior to the events of 2006, this cannot simply be attributed to disruption caused by that crisis, but instead systemic factors in academic failure. A study of learning achievement (Vine 2007) shows that Timorese children in Grade 3 and 5 were not able to correctly answer questions of at the lowest difficulty in mathematics, Tetum and Portuguese, as expected of the curriculum for primary school children (MECYS 2004).

Features of classroom talk

The introduction to this paper mentioned two problems that can be easily observed. These underpin the third problem, the main focus for this paper. Firstly, across all settings in the study, teachers used varying amounts of Portuguese to teach and made a variety of grammatical as well as lexical errors, depending on their experience and confidence with the language.

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[1] Thanks to Professor Joseph Lo Bianco, The University of Melbourne, for his comments on the draft of this paper.
[2] This data was collected in 9 classrooms over 11 lessons in 5 sites in Dili, Baucau and Lautem, using both town and rural sites. Curriculum areas included Mathematics, Portuguese, Tetum, and *Estudo do Meio* Science/Social Science curriculum strand. The corpus represents approximately 20 hours of classroom activity
[3] This information was provided by the Ministry of Education in April 2008

Table 1: Teacher errors in Portuguese language

Agusto: *as palavra monossilábicos*	confusion of masculine/feminine forms; confusion of singular/plural
Julia: *por isso lado já tem e aresta nove centímetro… por isso …nove centímetro vezes nove centímetro vezes nove centímetro vezes*↗ [4]	plural form of *centímetros* not used
Francisco: *quatro lados* ↘ *agora a quadrado esta aqui tem quatro a rectas* ↘	throughout the lesson the teacher uses the word *recta/s* English = straight line instead of the correct *ângulo recto* English = right angle

While not always major errors, they tended to recur across all talk and show that teachers are not able to model correct Portuguese.

Secondly, and more importantly for the curriculum, teachers make both minor and major errors about the content they are teaching, as illustrated below. Here the teacher confirms that 2.5 translates as $2.05, not the correct $2.50.

Table 2: Teacher makes mistakes in content: Helder

T e número dois ... dois ponto cinco ... dois ponto cinco ... ou dois vírgula cinco ..... quantos dinheiros tem↗ .... T dois ponto cinco ... a significa o que↗ Ss dois dollar cinco cêntimos ... T e cinco e cinco centavos eh↘	and number two ... two point five ... two point five ... or two comma five ..... how much money do you have↗ ... two point five ...it means what↗ two dollars five centimes ... and five and five centavos eh↘

In other instances, individual teachers were observed teaching students that the esophageus is a bone, rather than a tube, that a potato is a cereal, rather than a vegetable and that formula for cubic mass includes a superfluous $x\ 1cm^3$ rather than understanding the mathematical implications of multiplying three dimensions. These content errors occurred regardless of the language variety – Portuguese or Tetum – being used.

However, the more fundamental problem of how teacher talk effectively to help students learn and construct new knowledge is discussed in more detail in the following discussion of classroom activity.

Long passages of teacher talk

Evident in all settings observed was the high proportion of teacher talk in contrast to student talk. This shaded areas in this excerpt displays a typical pattern of teacher talk in relation to student talk.

Table 4: Rudolfo, Tetum class

88	T	seidauk hatene sistema fonétiku ... ita tenki hatene lai sistema lasala... hatene didiak ... primeiro sistema uniforme .. hakerek tuir .. liafuan hotu-hotu ho oin ida de'it ... depois [reads from board] 'sistema lasala katak fó ba liafuan ida-idak hakerek ida ne'ebe haleno liafuan ne'e nia son' tuir ninia son↘ ...hakerek tuir ninia son↘ ida ne'e maka sistema lasala□ agora tuir fali ne'e sistema fonétiku ... sistema fonétiku ... ita hakarak hatene saida mak sistema fonétiku ..... [T gets eraser] ne'e hotu ona↗
89	Ss	hotu ona
90	T	ah ida ne'e uluk ita hakerek tiha ona hau seidauk esplika diak .... agora sistema ..... fonétiku ita hakarak hatene sistema fonétiku ..... fonétiku ah hanesan ida ne'e ...ita

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[4] The use of arrows throughout transcripts indicates ascending and descending inflection, used by teachers to signal questions and closure of ideas.

		...fonétiku tenki iha ne'e asento iha porque ida ne'e uluk ita hateten ho tetun katak saida↗ ... ne'e iha↗ ... ida ne'e mak naran saída↗

Students participate little in classroom discourse. When they do, the answers are prompted solely by the teacher or by reading directly from the blackboard or textbook. Construction of meaning is clearly the domain of teachers with little reference to the learners.

Repetitious answers

Indeed, when students do participate in the lesson, the answers are highly repetitious and patterned, as illustrated below.

Table 6a: Margarita, Science class

636	T	o quem quer fazer uma pergunta↗ alguma dúvida ... quem quer fazer uma pergunta↗ pode fazer em Tetun ou em português libré ... quem quer↗... todos nós comemos .. todos estámos satisfeito todo bem ninguem não tem dúvida quem que tem dúvida↗ ..... não há dúvida↗ .... certeza↗... certesa quem que não há dúvida↗
637	Ss	não
638	T	então pronto ... depois passam isto para os vossos cadernos .... sim↗ .... passam para os vossos cadernos para terem uma noção e estuda estudar ..sim↗
639	Ss	sim
640	T	e assim ... para nós sala de hoje terminamos de xx com um nova idea para escolher os alimen↗
641	T	os alimentos↘
	Ss	alimentos
642	T	estes alimentos estão contidos na roda dos alimen↗
643	T	alimentos
	Ss	alimentos
644	T	todos os dia vocês vão fazer este selecçao de aliment↗
645	T	alimento↘
	Ss	alimentos
646	T	mas algumas vezes .. as vossas mãe dizem que ai o lalika mai husu ida ne'e tamba .. tambasa↗ ..... tamba dala ruma ita osan la i↗
647	T	la iha↘
	Ss	la iha

In this passage the students are limited in the words they use. In fact, over the 2-hour class, the students repeated the word *alimentos/food* 22 times and always as a single word rather than within a sentence which would constitute a longer passage of meaning. In all transcripts, it was rare to observe students using more than one word/one noun answers.

Not explaining the answer

When asking questions, the teachers observed used 'closed' questions, requiring students to provide the one correct response. However, teachers did not use strategies to assist student to find/construct the target answer. Rather than provide clues or lead students through a process to find the answer, teachers merely repeated the question until someone guessed it or the teacher provided the answer. The following excerpt shows the teacher asking for the number of paragraphs in a text: at no time does the teacher explain a paragraph, but merely asked students to 'look carefully'.

Table 7: Manuela, Portuguese class

		Transcript	*English*
560	T	quantos parágrafos tem o texto↗ ... o texto está a dividir em quantos parágrafos↗ ... o texto está a dividir em	how many paragraphs in this text↗ ... the text is divided into how many paragraphs↗ ... the text is divided into

		quantos parágrafos↗ ... quantos parágrafos↗ ... haree didiak atensaun didiak atensaun didiak hau haree ... la ... la barak la barak ida atensaun didiak ... Agusto↗	how many paragraphs↗ ... how many paragraphs↗ ... look carefully [pay] attention carefully [pay] attention carefully I see ... not .... not many not many ones [pay] attention carefully ... Augusto↗
561	S	paragrafo	paragraph
562	T	o la haree neba↗ o la haree texto laran↗ ... naran hatete de'it haree didiak ... quantos parágrafos↗ hatene parágrafos↗ parágrafos↗ hatene↗	don't you see there↗ don't you see in this text↗ ... the name only look carefully ... how many paragraphs↗ you understand paragraph↗ paragraph↗ understand↗
563	Ss	hatene ...	understand
564	T	haree didiak haree didiak lai	look carefully look carefully

Teachers were often observed becoming increasingly angry with students who did not know the answers to questions. At the same time, teachers were not able to explain how to find the answer or processes involved.

Effect on student learning

These extracts illustrate that students had little control over what they said about the topics, generally being limited to one-word, stylised and teacher-generated answers, little beyond single word labelling of ideas. This strategy merely repeats the thinking of the teachers rather than engaging in students' own thinking. There was little opportunity for students to re-state or re-formulate the ideas in any language in order to assist thinking and learning. Students did not use language in extended passages to extend their knowledge of the subject or, importantly, extend their ability to use Tetum and Portuguese.

Arguably the most problematic aspect of this style of talk in terms of learning is the reliance on the teacher to permit, regulate and sanction learning. Students are given no responsibility for learning or provided with skills in how to learn independently. They are distanced from the learning material by being afforded few opportunities to participate in the learning activity itself.

An alternative orientation to talk and learning

It is perhaps time to consider programs that assist teachers to use different strategies for teaching and learning in Timorese classrooms. The national curriculum is based on principles[5] that suggest a socio-cognitive and constructivist position, similar to many curricula throughout the world, yet not reflected in the observations of classrooms. An approach to talk that would support the curriculum is one used widely in classrooms, influenced by Vygotsky's (1978) connections between thinking, talking and learning and the importance of social interaction to support thought. These ideas have influenced many others in exploring the effect of speech in thinking in educational contexts (eg Wood, Bruner & Ross 1976; Tharp & Gallimore, 1988; Rojas-Drummond et al 2001; Mercer 2002; Walqui 2006). As Corden (2000: 112) notes

'The essence of constructivist learning is that pupils will gain through social interaction with others, where they share perceptions, extend their knowledge base, and develop their conceptual understanding through being exposed to other, sometimes conflicting, views of the world'.

At the heart of this orientation to learning is the importance of interaction between learners and teachers, and learners and each other. 'Learning, above all, is a social process' (Halliday & Hasan 1985: 5). Programs where teachers consciously use talk strategies to help students interact to learn has shown that

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[5] These 10 principles are stated (MECYS 2004) as "Accredited; Child-centred; Clear roles; Democratic; Flexible; Inclusive; Locally-based; Needs-based; Supported; and Team-based"

students not only learn the subject matter and the vocabulary of the subject area, but also learn the reasoning that leads to deeper understanding of subject matter (see Mercer et al 2003; Mercer et al 2004; Mercer & Sam 2006).

The role of the Teacher

Since classrooms in Timor-Leste contain few material aids for learning, learning relies heavily on the skill and ability of the teacher. This puts great responsibility on the teacher to use the resources to hand, one of which is their own talk. As Barnes (1977: 71) notes 'quality of discussion – and therefore the quality of the learning – is not solely determined by the ability of the pupils ... [or] their interest in the subject matter .... these are open to the influence by the teacher'. Thus, teachers have a pivotal role to play in providing opportunities for quality talk and through this, learning.

It may be useful to contrast these models of classroom talk with one from another setting (Love, Baker & Quinn 2008). Similarly to the Timorese examples, this extract is taken from a Grade 5 classroom, within a whole class discussion with 32 students and conducted without any visual or other aids. While this example operates in students' first language, it is the talk strategies to note here, rather than the language variety.

Table 10: Grade 5 classroom

1	T	All right ... looking for someone who can tell me something that's .. let's see .. always in a report ... Tory ... d'you think you have an idea about what's always in a report↗
2	S1	They've always got paragraphs ... and I saw that .. when our group looked over all the ah the reports
3	T	So every single one had paragraphs↗
4	S1	Yep .. that we had here every one had ... every single .. report had paragraphs
5	T	Well, would we agree with Tory on that one↗
6	Ss	Yes
7	T	All right ..... so we always have paragraphs [writing up on the poster] .... and I'm guessing we always have sentences in that *[looks to S for confirmation]* yeah .. um Sean
8	S2	On the ah .. on all of them they always start ah .. at the start of the paragraph .. it always on the first one in the paragraph it always had ... um what it is
9	T	And
10	S2	Like what it is and what it's used for
11	T	OK when you say...
12	S2	Explaining what it is
13	T	So like it classifies it↗
14	S2	Yeah
15	T	What's that like↗
16	S2	It's like .. um
17	T	What text does that remind you of↗
18	S2	Oh um written text↗
19	T	*[T gestures that she wants more]* something we did last term
20	S2	Oh yeah ... um
21	T	*[T waits then redirects]* Caitlin can you help him out☐ you're in his group
22	S3	Explanation↗ because it they both start off with a paragraph saying what it is
23	T	All right so we have in the beginning here Sean (S2) they always start off by saying↗ .. what it is I'm going to call that classification *[writes classification at the beginning on the poster]* and this at the beginning is important isn't it ... why would this *[pointing to classification]* have to go at the beginning why would it be a bit silly to put it ... further down .. in the text↗ um... Vanessa↗
24	S4	Cos if you put it put it at the start they'll know what you're talking about *[T gives 'of course' gesture to encourage S]* but if you put it you put it at the end they won't

| 25 | T | know what you're talking about |
| | | That's right and isn't it important when you pick up a text to know what you're reading about↘ |

Here the students have the opportunity to speak in sentences and to construct their ideas through talk. The teacher listens and then asks the students to think further in order to construct and extend ideas: 'every single one had paragraphs?'; 'What's that like?'. The teacher involves the whole class in 'group think' by asking others to fill in gaps left by incomplete thoughts: 'Caitlin, can you help him out?'; 'Well, would we agree with Tory on that one?' While the teacher still has the greater proportion of the speaking time, students contribute meaningfully to what the class knows.

Teacher education for better talk

It is not enough to expect teachers to know instinctively how to use talk productively. Teachers can be taught to be more conscious of the ways they speak and how to use talk strategies in imparting information (eg Love in press; Sutherland 2006). Love (in press) notes 'Noticing language, even when it appears to be transparent, is essential for teachers committed to supporting the general intellectual and specific subject matter competencies of students at all levels'.

While 'chalk and talk' is a strategy that most Timorese are clearly comfortable using, improving the ways teachers construct and unfold information can enhance this strategy and put emphasis on student learning rather than merely teacher teaching. Wells (1986: 120) suggests that teachers need to 'talk less and to listen more' in order to allow students greater chance to formulate ideas. Teachers need to understand how this works for their students and enhance achievement.

Conclusion

Discussions of improving education in Timor-Leste need to move beyond simply looking at language varieties and arguments about the place of Tetum and Portuguese. These need to consider how skills in using talk transcend language variety and work across language commonalities. In settings where educational materials are scarce, teachers and students can capitalise on the resource they share: talk, and in languages they share and languages they seek to learn. Assisting teachers to learn these skills through quality education programs in the effective use of classroom talk across all subject areas and across all languages would be a worthwhile step in strengthening teacher skill. Importantly, this may, then, contribute to increased opportunity for student success in schooling.

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