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ABSTRACT

This article considers arguments for and against the use of coding systems in classroom-based language research and touches on some relevant considerations from ethnographic and conversational analysis approaches. The four authors each explain and elaborate on their practical decision to code or not to code events or utterances at a specific point in a specific research project. Three of the researchers have chosen mixed research designs, of which two involve some coding at the data collection stage, the third only as part of later analysis. The fourth researcher concentrates on the data collection stage and offers a five-part rationale for not coding at this stage. (Contains 51 references.) (Author/MSE)

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TO CODE OR NOT TO CODE?

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Abstract

This article considers arguments for and against the use of coding systems in classroom-based research and touches on some relevant considerations from ethnography and Conversational Analysis. The four authors each explain and elaborate on their practical decision to code or not to code at a specific point in a specific research project. Three have chosen mixed research designs, of which two involve some coding at the data collection stage, the third only as part of later analysis. The fourth author (Gourlay) concentrates on the data collection stage, and offers a five-part rationale for not coding at this stage.

1. Overview of paper

Sections 2 - 4 of this paper explain what coding systems are, and outline some of the arguments for and against using them in classroom research., plus some possible compromises. These sections are intended as background only: the issues have been discussed at length in numerous books, and we do not aspire to introduce new ideas at this level.

Sections 5 - 8, the individual case studies, form the kernel of the paper. In each of these we take one micro-issue from a different research project, which involved making a choice between coding and more qualitative data collection: we outline the issue, the decision taken and (where known) the outcome. The final section offers some tentative general conclusions.

Our four studies, although very different, may all be thought of as falling within a research tradition which emphasises process, and the classroom as a social setting. This is not to say that they are without relevance for other kinds of classroom research.

2. What is a coding system?

A coding system is a way of reducing (and, inevitably, interpreting) data - in our case, classroom events observed in real time and/or audio-recorded and/or video-recorded - by assigning them to a taxonomy of (usually pre-specified) categories, on one or more dimensions. We are concerned with such coding when used **for research purposes**, though other uses, especially in teacher training, are possible and indeed frequent, and for some systems (e.g. Flanders 1960, Moskowitz 1971), the research use is a minor offshoot of teacher training use.

Our first illustration is the Stirling system (Mitchell, Parkinson and Johnstone 1981), which can produce lesson codings such as the following (simplified example):

Time (minutes)	Activity	Topic	Grouping
0 - 2	Real	Routine	Whole Class
2 - 7	Imitation	Situation (Course Book)	Whole Class
7 - 12	Drill	Situation (Course Book)	Whole Class
12 - 21	L1	Language Point (Course Book)	Whole Class
21 - 23	Real	Civilisation	Whole Class
23 - 35	Real	Civilisation	Pairs (same task)

A very different example is the BIAS system (Brown 1975), which requires the observer to tick boxes every three seconds. The categories in this system and an example (both as reproduced in Malamah-Thomas 1987), together with an extract from a completed sheet filled in by one of us, now follow:

Definitions:

TL: Teacher lectures, describes, explains, narrates, directs.
TQ: Teacher questions, about content or procedure, which pupils are intended to answer.
TR: Teacher responds, accepts feelings of class; describes past and future feelings in a non-threatening way; praises, encourages, jokes with pupils; accepts or uses pupils' ideas; builds upon pupil responses, uses mild criticism such as 'no, not quite'.
PR: Pupil responds directly and predictably to teacher questions and direction.
S: Silence. Pauses, short periods of silence.
X: Unclassifiable. Confusion in which communication cannot be understood; unusual activities such as reprimanding or criticising pupils; demonstrating without accompanying teacher or pupil talk; short spates of blackboard work without accompanying teacher or pupil talk.

Example:

T:	Well	
	Today I thought we'd do three quizzes. We won't take the whole lesson (...)	
	because I want to talk to you some of the time. The first quiz is this.	TL
	Can you fill in this sentence?	
	See if you can do it in your books.	
	Finished Joan?	TQ
	And Miri:	
Miri:	Yes	PR
T:	Finished?	TQ

The system in use:

Practice Coding No. 2. Coder: B. Parkinson. Date: 26th. October 1995.

Videotape: British Council TLF 1, Lesson 1. Teacher: J. Fry.

Class: Beginner Adults, Hong Kong. Start: Start of Tape (00.19)

System: BIAS.

Seconds	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30	31-33	34-36	37-39	40-42	43-45	46-48		49-51	52-54	55-57	58-60
TL	/	/	/	/	/	/	/	/	/	/	/	/		/	/			/	/	/	/
TQ																					
TR								-					/			/					
PR	/																				
PV													/		/						
S																					
X																					

Seconds	61-63	64-66	67-69	70-72	73-75	76-78	79-81	82-84	85-87	88-90	91-93	94-96	97-99	100-102	103-105	106-108	109-111	112-114	115-117	118-120
TL			/			/														
TQ	/	/		/	/		/	/	/	/	/									
TR								Joke												
PR	/	/		/	/		/	/	/	/	/	/	/	/	/	/	/	/	/	/
PV																				
S																				
X																				

There are hundreds of coding systems, varying enormously in their focus, their mechanics and underlying philosophy - for further discussion see the works quoted above, and also Chaudron (1988), Allwright (1988) and Spada (1997).

3. Arguments against, and alternatives to, coding systems

Almost since the beginning of systematic coding in research, but perhaps most strongly since about 1977, arguments have been voiced against it, and more generally against the quantitative approach to observation (which is not an identical concept - see below - but in practice the labels are often used interchangeably). Mehan (1977) makes the following criticisms of this approach:

(i) It focuses on teacher behaviour not student behaviour.

(ii) Time sampling 'obscures the sequential flow'.

(iii) It ignores 'contingent aspects of interaction', e.g. what happens to students who do not speak.

(iv) It ignores issues of students' competence in interpreting underlying functions of utterances.

(v) It ignores multiple functions of utterances.

(vi) It treats teacher and student behaviour as isolated acts.

(vii) It fails to relate the utterance of the classroom to the culture of the community.

All these criticisms had some force with regard to the coding systems common at the time, among which FIAC (Flanders 1960) and the closely related FLINT (Moskowitz 1971) were dominant; argument (i) is less true now, but the others remain powerful.

Of the non-quantitative approaches to classroom research, many use the label 'ethnographic', often with some prefix, adjective, etc. - General Ethnography, New Ethnography, Microethnography, Constitutive Ethnography, Ethnography of Speaking/Communication, Ethnography of Schools and at least 20 others (see Trueba & Wright 1980-1). Ethnography is not just a method of observation, but an approach usable in most kinds of FLT research (see e.g. Parkinson 1995): when applied to observation, it almost always implies trying to see events from the point of view of those observed - what categories they use, what rules they follow, what sanctions are applied when rules are violated. Ethnography may be concerned with 'socialisation', i.e. how (usually) teachers put pressure on students to conform to their expectations, or, more credibly in our opinion, with 'co-construction', how an event such as a lesson is shaped by the wants, needs, attitudes and beliefs, and resultant behaviour, of **all** participants, both teachers and students. (This invokes the principle that 'order is a produced orderliness', which we owe to Conversational Analysis (CA) - see e.g. Psathas 1995. CA may be seen as a kind of ethnography, or as a related approach, and its philosophy has influenced Sections 5 and 6 of this paper.) Ethnographers usually do not code at all, preferring continuous-prose accounts - what Geertz (1973) calls 'thick description' and Erickson (1986) 'rich description'. When they do code, they remain (arguably) 'qualitative' by not adding up totals of categories but using the coding to generate an account of typical sequences and other patterns, as in Van Lier (1988). An analogy may be made with study of the grammar or phonology of a language, which typically attaches far greater importance to establishing what patterns are possible, and what differences (of form) make a real difference (of meaning), than to counting frequencies.

A special issue of *TESOL Quarterly*, number 29, 3 (1995), is devoted to qualitative research, mostly of a loosely ethnographic type, and treats more fully the above ideas, especially in articles by Davis (1995) and Lazaraton (1995).

Another kind of 'qualitative' observation often appears under the label 'Action Research', or sometimes 'Participant Research'. (In principle these two kinds could simultaneously be ethnographic, but in practice overlap seems small.) Here the teachers themselves are researchers: Somekh (1993) identifies five stages:-

(i) (.....) participants collaborate with each other and with outsiders to decide upon a research focus and collect and analyse data;

(ii) the process of data collection and analysis leads to the construction of theories and knowledge;

(iii) the theories and knowledge are tested by feeding them back into changes in practice;

(iv) to evaluate these changes, further data is collected and analysed, leading to refinement of the theories and knowledge, which are in their turn tested in practice, and so on and so forth .....;

(v) at some point, through publication, these theories and knowledge are opened up to wider scrutiny and made available for others to use as applicable to their own situation. This interrupts the cyclical process of research and action, but is useful in bringing the research to a point of resolution, if only temporarily.

Like ethnographic research, participant/action research may use coding in its classroom observation phases - (see Davies & Parkinson 1996 for a borderline example) - and it may also use quantification (see Hopkins 1993 for several examples), but it is more likely to use continuous-prose, mainly qualitative accounts.

4. Counterarguments and compromises

Whilst a very extensive body of arguments against quantification/coding and for qualitative approaches can be found in the literature, arguments on the other side are harder to come by. There are of course the original arguments for coding as opposed to no systematic enquiry at all - see previous references to Flanders, Moskowitz, Allwright, Chaudron, Malamah-Thomas - but the coding specialists' attitude to non-coders generally seems benign and tolerant, if ill-informed - that it is just a different kind of research.

Anecdotally, however, it appears that those who attempt purely qualitative classroom observation, at least within foreign-language teaching, often encounter problems. We cannot give full references for these, as some allusions are to unpublished research, or to early and private stages, or even to matters of legal or other dispute. Our impression, though, is that the problems encountered, or at least claimed, are of four main types:-

(i) When the research report is wholly or almost wholly based on teachers' own perceptions, it can seem rather bland: "We're all doing the same thing, it's the obvious way to teach, we're all communicative here .....".

(ii) When the researcher behaves as a fully-fledged ethnographer, rather than a linguist or language teacher, and uses (mainly at the report stage) the language of sociologists, this can alienate those observed. Paradoxically, efforts to incorporate teachers' and learners' own ways of seeing and talking can make things worse not better, as these are relativised in what can seem a patronising way.

(iii) Researchers may fail to satisfy their readers and to achieve their purpose in writing up data: for example Ph.D. candidates may be told that their work is not sufficiently 'objective', or 'scientific', or 'linguistic', whilst professional researchers, including 'experts' called in to evaluate a programme, may be warned that they are failing to provide the 'hard' evidence needed to satisfy funding bodies and other authorities.

(iv) More positively, it often happens that the researcher ultimately *wants* to code: whilst before data collection, or at least before analysis, s/he thought in purely qualitative terms, s/he decides after repeated passes through the data that s/he is, *de facto*, putting them into categories, and that it will be more insightful to him/her, let alone to others, if s/he makes this explicit. (Of course, this implies *post hoc* coding, which would not satisfy sociometric purists, but can have its own logic.)

Such a researcher rarely wishes to abandon all qualitative description, but may seek a compromise design which includes both this and coding-based information. Examples are given in the following sections.

5. Research on classroom culture: Edinburgh (Lesley Gourlay)

5.1 Introduction

This section describes the research design and outlines the research questions of a study which is currently in the planning, pre-data-collection phase, and offers reasons for *not* employing a coding instrument for the recording of classroom events.

The study will relate to a single, mixed-nationality, adult EFL class at the Institute for Applied Language Studies, University of Edinburgh. The broad focus of the study will be on what has been described as 'the culture of the classroom'. More specifically, it aims to look at the development of the participant rules and norms of discourse and action within a particular class over time. It assumes that these norms are not explicitly established at the beginning, but that they evolve as the class progresses in its career. This 'evolution' is seen as resulting from the contributions of both teachers and learners - a process of co-construction which is realised in the discourse and action of the classroom. This research aims to concentrate primarily on the learners' contribution to this process, looking at both their actions and discourse in the classroom, in addition to making use of semi-structured participant interviews.

The primary means of data collection will be classroom observation and non-structured note making, which will be backed up with audio or video recording of the classes in progress. This will be augmented by participant interviews with the learners.

5.2 Data collection

5.2.1 Classroom observation and field notes

As the investigation will take the form of a case study, the aim will be to observe the class from as near the beginning of the course as possible. Notes will be taken on the interaction of the students in class, their behaviour in group work and whole class work, their interaction with the teacher and with each other. Particular attention will be paid to behaviour which might be seen to redefine participant rules, test boundaries or explicitly negotiate norms of participation. In-class observation may also present an opportunity for the recording of negotiation, which may serve to back up any inadequacies of the audio/video recording.

5.2.2 Audio/video recording of the classes in progress

The aim is to video-record the lessons in progress, or at least audio-record them. If consent is given for video, it would be preferable, as it provides more information about the grouping, interaction, turn management, mood and expression than audio can provide, although it may prove to be distracting at the beginning, causing initial self-consciousness.

The purpose of recording the classes in threefold. First, it will provide an opportunity to analyse the patterns of the classroom discourse as a whole. Second, 'significant incidents' may be collected and transcribed for close microethnographic analysis. Third, it may provide material on which to base stimulated recall interviews, as described below.

5.2.3 Interviews with the learners

Interviews will be conducted with the students, and possibly the teacher, using video clips of selected incidents as a starting point for semi-structured discussion. This phase of the research aims to investigate the participants' own perceptions of and views about their experiences as class participants, their roles and their perceptions of their discourse 'rights', and their previous learning experiences. More than one round of interviews may be conducted, should the students be willing, or perhaps a focus group in addition to interviews.

5.2.4 Other sources of data

In addition to the above, there will be an attempt to gain access to additional data sources - for example bio-data related to the students, needs analysis forms, and perhaps learner diaries. There may also be opportunities to spend time with them outside class, in breaks or before or after classes. The aim is to amass a rich set of data related to the students, in order to get as complete a picture as possible of who they are, what their motivations are, and how they see themselves in relation to the group. These sources of additional data will be dependent to a large extent on the degree of interest the students have in the study, and their willingness to chat informally in addition to completing forms or diaries. The course itself, its aims, syllabus and structure, and perhaps the teacher's lesson plans, will also be important reference points.

5.3 Rationale for not coding

The decision *not* to use a coding instrument for data collection has been made for the following reasons:

(i) At the heart of the investigation is the view that the social life of the classroom is essentially non-static - the study aims to develop an account of what is seen as a shifting, dynamic, evolving entity. For this reason it was felt that a more narrative form of data collection would be more appropriate - a format which may reflect more adequately the chronological ordering of events - telling the 'story' of the development of a group.

(ii) As the study is focused on process, it does not aim to establish or test cause-and-effect relationships between variables, nor does it hope to generalise findings to other classes using statistical tests of significance, although it may generate implications. Its premise is that although classrooms in general may exhibit common features, each one is unique, as its culture is the result of the contributions of its particular participants. For these reasons, there is no motivation to isolate and quantify variables through the use of a coding system, at least in order to employ inferential statistics. As Nunan points out, '... not all ethnography is out to ascribe such causal relationships, and so the problems which beset the quantitative researcher in a field setting become unimportant.' (1992:54).

(iii) The study aims to be holistic, and so does not isolate particular behaviours and features of the surrounding discourse at the data collection stage. As the essence of the study is the notion of co-creation of an unfolding mini-culture by the participants, this emphasis on interconnectedness and the importance of discoursal context make the isolation, categorisation and quantification of individual utterances or behaviours seem less relevant to the research aims (Van Lier 1988). An attempt to record and analyse them in isolation from the discourse in

which they are embedded, would, in this study, render them meaningless, as the focus is very strongly on the relationships between the participants and how these are expressed and developed in the discourse, as pointed out by Delamont and Hamilton (1984), in their discussion of the drawbacks of coding systems.

(iv) As the class is seen as being unique, the absence of a coding instrument may leave the researcher more open to perceptions of how that class is developing. As an attempt is being made to gain access to the participants' perceptions of the ongoing classroom process, a coding system could risk artificially structuring the researcher's perceptions during observations, potentially 'blinkering' her to events which do not fit neatly into pre-ordained categories. Nunan comments on this:

> Rather than subscribing to a belief in external 'truth', ethnographers believe that human behaviour cannot be understood without incorporating into the research the subjective belief systems of those involved in the research, both as researchers and subjects. (Nunan: loc.cit.)

(v) Finally, the type of phenomena being investigated do not lend themselves to easy categorisation. In order to account adequately for the subtle changes in the norms of the group, the researcher may be required to refer to intangibles and slippery concepts such as atmosphere, facial expression, tone of voice, and so on. A non-structured format of data collection allows the observer the freedom to give a 'richer' description of the process, which in the context of this study seems to be more useful.

All these five arguments relate, in the first instance at least, to the data collection phase, which is the immediate concern. Some of the arguments have undoubted force at the data analysis stage too, but decisions about this stage have yet to be taken, and the possibility of employing some form of coding - in the widest sense, perhaps including Goffmann's 'frames' (1974) - is not ruled out.

6. Research on individual and class academic cultures: Singapore (Parveen Sandhu)

6.1 Introduction

This section relates to a study of two first-year secondary school English language classes in Singapore, using an ethnographically-influenced approach. The discussion covers why and how data was gathered without the use of coding, as well as some of the issues that led to the use of coding during data analysis.

The purpose of the study is, firstly, to investigate how individual academic cultures (or cultures of learning) manifest themselves in the behaviour of teachers and learners during their English language lessons (over a period of three weeks), and, secondly, to consider how these different cultures work towards a gradual co-construction of the general academic culture of each of the two classes.

Research questions shape methodology, and in this case this meant that the ethnographic nature of the study, as well as its topic of classroom culture, called for data collection that would allow for the generation of rich and thick descriptions. Data was thus collected using classroom observations that involved note-making as well as audio-recording, student and teacher interviews, student questionnaires, student journal entries and student compositions (done as assignments). In the rest of this discussion, I will describe how classroom observations were carried out, and explain why I chose not to code.

6.2 The reasons for not coding during data collection

I wanted to create thorough and comprehensive descriptions of individual academic cultures and general classroom academic culture. Dey, quoting Denzin, says that such a description would encompass 'the context of an act, the intentions of the actor, and the process in which action is embedded' (Dey 1993:31).

I wanted to avoid entering the class with pre-defined notions of what ought to constitute individual and class academic cultures. Such researcher notions or preconceptions are invariably built into data-gathering instruments that involve coding. I sought to uncover an emic perspective, and therefore need to avoid using etic, or outsider-imposed categories in the form of coding. What was needed was a methodology that 'captures the mutual synchronisation of behaviour to provide an adequate ethnography of classroom life, not one that simply tabulates frequencies'. (Mehan 1979:11).

Like Hammersley (1986), and Mehan (1979), I find collecting data through systematic observations (or through the use of quantification schemes) incompatible with the intentions of my study. This is because the use of coding would usually ignore the temporal and spatial context in which the data is collected. Coding is also usually concerned with overt, observable behaviour, and this would neglect other less observable but potentially meaningful features. As such, the interrelationship of verbal and nonverbal behaviour becomes difficult to explore. Codes place arbitrary boundaries on continuous phenomena, obscuring the flux of social interaction. They also force observers to make discrete choices among categories.

Like Dey, I believe that '...any "data", regardless of method, are in fact "produced" by the researchers,' and so 'collecting data always involves selecting data.' (Dey 1993:15). The pre-specification of categories in the form of codes would determine what is discovered by the research, as concern with specifying and counting observable indicators can lead to only those things being researched. In my desire to minimise data production, I thus chose not to code as I collected data during classroom observation. During my first few days, my focus was wide - as I believed that starting my study by casting the net far and wide would allow what was unique to the particular context to surface and so direct the study into a more narrow focus. In this way, I hoped to avoid pre-determining what would be discovered by the study.

6.3 Classroom observations

I entered the research context with a 'shopping list' of sorts which displayed the various ways in which a student or teacher's academic culture could manifest itself. However, upon entry, I did not refer to this list as I was gradually caught up in observing and describing classroom behaviour. I made notes about participant movement and other physical description - i.e. what the audio-recorder could not capture. I aimed for a fly-on-the-wall status, but realised that my presence would never really go unnoticed - especially by the teacher.

In all I observed and recorded 12 lessons with one class, and 16 with the other.

6.4 Data analysis and coding

The strength of an approach can very often be its weakness as well. As already mentioned, not coding during data collection was seen as central to the approach and focus of the study. However, data not captured in codes would without doubt be difficult to analyse. Faced with masses of raw data, I had to find a way of converting it all into readable and digestible continuous prose while remaining true to what was originally observed. The data had to be summarised in a systematic and objective way so as to minimise both researcher-subjectivity and researcher data production. I aimed to construct a write-up which would be sufficiently objective and reliable and therefore credible to others, such that my summary of the data would approximate as closely as possible to someone

Continuous prose is based on generated accounts of typical sequences and patterns. In order to identify the typical pattern (or any pattern at all), I first had to analyse the data for the range of the phenomena being examined. To identify sequences and patterns, I drew up categories, and counted the number of times a certain phenomenon occurred. This allowed me to know what was more typical or common in one class, apart from bringing to the analysis a degree of systematicity in demonstrating how the data had been reduced. In summary, bits of data were put into categories, which were themselves then collapsed to form more general categories in some cases, or, in others, divided into more specific ones. In this manner, descriptive statistics were used with the intention of thickening the eventual description of individual and general (class) academic culture. What was done is in tune with what Dey says about description and analysis:

> Description lays the basis for analysis, but analysis also lays the basis for further description. Through analysis, we can obtain a fresh view of our data. We can progress from initial description, through the process of breaking the data down into bits, and seeing how these bits interconnect, to a new account based on our reconceptualisation of the data. We break down the data in order to classify it, and the concepts we create or employ in classifying the data, and the connections we make between these concepts, provide the basis for a fresh description. (1993:30)

Thus, while coding was not used during data collection, it was seen as important during data analysis.

7. Research on role relationships: Pennsylvania (Manel Lacorte)

7.1 Introduction

This section describes research analysing the nature of role relationships between teachers and learners in classrooms of Spanish as a Foreign Language, with special attention to the teachers' views about these relationships. The courses involved in the study were conducted during the academic year 1997-1998 in four high schools - three public and one private - and a private liberal-arts college, all in Pennsylvania, USA.

In the past few years, the world of second language education has shown an increasing interest in classroom management and environment, due in part to the development of learner-centred approaches to language teaching and learning (Nunan 1988, Tudor 1993, 1996). Some authors have reported on the different roles adopted by teachers and learners within both institutional and classroom contexts (see e.g. Widdowson 1987; Wright 1987, 1990; Richards & Lockhart 1994). My study attempts to broaden the understanding of role relationships through a direct and systematic observation of what goes on in the language classroom, as a specific social and cultural event created and experienced by its participants (see e.g. Breen 1985, Prabhu 1992, Coleman 1996, Sandhu in this paper).

7.2 Data collection

Based on this background, my methodological procedures and techniques attempt to conform to the dynamic nature of the processes taking place in the classroom setting. The concept of 'triangulation' as 'the inspection of different kinds of data, different methods, and a variety of research tools' (van Lier 1988:13) informs my use of a number of dimensions for the analysis of issues such as interaction, management, or socialisation in the language classroom. I have employed five different data collection methods: interviews, on-site and retrospective observations, stimulated recall, and teacher journals. Other complementary sources are a background description of the academic and institutional contexts of the schools, and my own research journal.

An ethnographic approach to the three rounds of interviews is intended to attain a gradual erstanding of the teachers' experience and behaviour with regard to their work (Spradley 1979).

The first interview - before the beginning of the school year - provides information about (a) the academic and professional background of the teachers, and (b) their perceptions towards learners of Spanish as a Foreign Language and their own teaching. The purpose of the second interview - halfway through the period of classroom observations - is to learn more about the domains in which the teachers organise their views about learners and teaching, this time in connection with the courses under study as well. Once the observations have ended, the third interview explores the dimensions of meaning employed by the teachers to characterise the above-mentioned issues. This interview includes the use of the stimulated recall technique, by which the teachers are asked to comment on transcripts of occurrences recorded during the observations.

While the data from the interviews come from particular encounters with the teachers, the journals supply information about teaching experiences described at an individual level in the course of the investigation. The classroom observations account for the interaction between the teachers and the learners within the classroom context, contributing to the discovery of issues other than those brought out in the interviews and the journals. Also, the implementation of two types of nonparticipant classroom observation - on-site and retrospective - allows me to (a) collect data on the verbal and nonverbal behaviour of teachers and learners, and (b) complement these data with other relevant aspects of the classroom environment, such as changes in its physical organisation, and any unexpected occurrences during the instruction.

The first column in the 'On-site Observation' sheet contains the episodes within the lesson selected for coding - the instructional stages in which the teachers organise their teaching: e.g. presenting new content (PR), giving instructions for the activities (IN), providing feedback after the activities (FE), etc. I code these stages with their abbreviations, including the on-site time at which they occurred. In a third and wider column, I record the nonverbal behaviour of the teachers during the lesson, the nonverbal interaction between teachers and learners during the transitions between stages, and any unexpected occurrences. Other characteristics of the nonverbal behaviour of each teacher can be included as they become more apparent in the observations. For this reason, although the description focuses on body motions - hand gestures, nods, shrugs, etc. - and the degree of physical proximity, it does not follow a pre-determined set of features in order to "identify, elaborate, and refine analytic insights from and for the interpretation of data" (Emerson et al. 1995:151).

I incorporate the data from the on-site observation into another sheet - 'Retrospective Observation' - which includes another column for the utterances recorded during the periods of transition between the instructional stages. My initial assumption was that a detailed description of the teachers' nonverbal and verbal behaviour during these transitions would provide me with relevant information about teacher/learner relationships. The transitions were determined from (a) the boundary moves by which one or more individuals indicate the beginning and the end of a stage, and (b) the verbal and/or nonverbal reactions to the above moves. Later on in my observation I decided to analyse relevant instances of change within the stages with regard to the interaction between the participants, even though these changes do not lead to a transition to a different instructional stage - e.g. a teacher scolding two students talking during an individual activity.

7.3 Some thoughts on the place of coding

The use of different data collection methods for this study attempts to move beyond the traditional classifications of roles for both teachers and learners. Instead, the purpose is to achieve a comprehensive description of the dynamic nature of role relationships in the classroom that could deepen our knowledge of (a) the conventions, norms, and behaviours defining the language classroom as a specific social setting; (b) the discourse uttered in a L2 classroom; and (c) moment-by-moment aspects of classroom management and classroom environment. Within this framework, the use of a coding system in my investigation allows me to gather information about the characteristics of the interaction between the participants in the language classroom setting. More specifically, the analysis

of the periods of transition between the instructional stages provides a precise account of the verbal and nonverbal interaction in the classroom when the teacher - or the learner(s) - resolves to move forward from one stage to the next, a process that involves a variable degree of (non)linguistic and interpersonal negotiation between participants.

The combination of coding with the other methods for the collection and analysis of data in this investigation may facilitate the understanding of role relationships in the L2 classroom as long as (a) each of the methods has a relevant purpose and a consistent design; (b) potential limitations inherent in implementing each method have been taken into consideration before and during the research; and (c) there is a clear account of the procedures followed in the organisation and analysis of data originating from diverse institutional, academic, and personal contexts.

8. Research on 'fluency classes': Edinburgh (Brian Parkinson)

8.1 Introduction

This section relates to research more fully reported in Gilroy, Fraser, Parkinson & Benson (1997). The three last-named authors participated in the lesson observation.

Unlike the research described above, this was not part of individual higher-degree (Ph.D.) work, but of the IALS programme of internally funded collaborative research. The aims of this programme include teacher development and curriculum evaluation as well as deepening general understanding of language teaching and learning. Our project related to afternoon fluency classes, sometimes in the form of special interest groups (see 8.2 below), lasting 5 hours per week, as part of a General English course of 20 hours per week. Students on this course are adults (mostly 18-30), of many nationalities and all levels, staying from 3 to (usually) 33 weeks in classes of (usually) 6 to 12 students.

The lesson observation part of the research consisted of 16 lessons taught by 5 teachers and coded by 3 observers. All the observers are also teachers on the course, though one was not regularly teaching on it at the time of the study.

8.2 Rationale for the observation, and problems resulting from a change of plan

The observation system was tailor-made for the special-interest groups which were due to run in May-June 1996 (having previously run in December 1995). In these classes, students work together to produce an end-product - a magazine, a video programme or a play - and the teacher is supposed to withdraw, to a greater or lesser extent, in the hope that this will force the students to interact for real purposes, to develop problem-solving techniques, interaction strategies, etc. The underlying research questions were stated as follows in the research proposal:

> Do students accept the responsibility for producing a specific product before a definite deadline? How is their acceptance, or non-acceptance, manifested in attendance, punctuality, preparation outside class, self-starting behaviour within class?
>
> How are turns distributed? Do all students get a reasonable share, in terms of quantity and quality? If not, why not? If so, how is this achieved - e.g. turn getting/stealing/offering? Does the requirement to produce a definite product within a definite deadline seem to encourage, discourage or have no effect on behaviour in this area?
>
> How teacher-dependent are the students? Do they expect teachers to solve problems for them, or intervene in other ways? If so which problems, which ways? If teachers refuse to intervene, what is the result?
>
> Are there periods of silence and/or unproductivity, for some or all students? Are they a problem? How are they terminated?

What kind of language do the students use, in functional/cognitive terms? Is there any indication that the requirements of the task encourage the use of a wider range than in a 'typical' language lesson - e.g. more speculation, planning, initiations, examining alternatives? (N.B.: As there is no control group and no rigorous measurement, any comparisons with other kinds of class will have to be speculative and based on impression.)

How, if at all, do all the above change over time?

Are the tasks actually completed, e.g. the magazine 'published'? What are the reasons for, and effects of, success and failure in task completion?

A serious problem arose when it became clear that (for reasons unconnected with the research) these special classes would not in fact be offered in May-June 1996, and that 'normal' General English afternoon classes would run instead. Research team members felt for a time that, because of this change, the observation should not go ahead, but a counter-argument was that the original focus was the afternoon classes in general, not the special interest groups: as the proposal says (Section 2.2):

> The [special interest] programme is different in some surface respects from 'normal' afternoon classes, but is intended to have the same underlying objectives and language focus, and is in some ways a particularly clear-cut example (and test) of their basic philosophy.

We recognised that some elements in the observation system might be less applicable than expected, but thought that coders could make common-sense adjustments. We do accept, however, that the change of focus leads to some problems of research logic.

8.3 The observation system

The lesson observation proforma consists of six pages. The observer is expected to use these pages in sequence, as follows:-

0-5 minutes	No coding or comments - observer can get his/her bearings
5-10 minutes	'Open' comments using Page 1
10-15 minutes	Coding with Page 2
15-20 minutes	'Open' comments using Page 3
20-25 minutes	Coding with Page 4
25-30 minutes	'Open' comments using Page 5
30-35 minutes	Coding with Page 6
35-40 minutes	'Open' comments using Page 1
etc.	

This pattern continues until 95 minutes, which should be about 5 minutes before the end of the lesson. On pages 1, 3 and 5, notes on events particularly relevant to that page, but occurring when the page is not in scheduled use, can be made, if time allows, in the 'other/general' section.

Pages 2, 4 and 6 are designed for detailed coding. In principle, codings can be made for every student every ten seconds, if one of the categories on the page occurs. In practice, it was recognised that coding in this detail would not always be possible, and coders were advised to use conventions such as the following (details were left to individuals):

- arrows where many codings would be the same, specifically:
  - vertical arrows where all or several students are doing the same thing.
  - horizontal arrows where one student does the same thing for an extended period.
  - diagonal arrows in all four directions where one coding covers all or several students for an extended period.
- shading to indicate where, especially in group work, certain students were not listened to at a particular time, and white space where (on pages 4 and 6) students were listened to but none of the codeable behaviours occurred.

Pages 1, 3 and 5 are intended for more 'qualitative', or 'impressionistic', or 'open' comments relevant to the general topic in the title of each page. It was hoped that observers would thus be able to 'recover' from the pressure of second-by-second coding, and also to give the kinds of reaction not easily reduced to a coding system.

Space precludes further description of Sheet 3 ('Silence/Apparent Unproductivity'), Sheet 4 ('Turn-taking'), Sheet 5 ('Miscellaneous') and Sheet 6 ('Negotiation'). The general principles of the system can, however, be seen from Sheets 1 and 2, which we reproduce on the following pages.

Sheet 2 was completed almost exactly as intended, and filled with letters, arrows, etc. A last-minute change, after a trial coding, was to use 'S' (speaking) and 'W' (writing) instead of the vague category 'A' - we decided that thinking was unobservable!

Sheet 1 usually produced about three one-line comments per five-minute period; a random sample follows:

"Whole class. Students giving ideas to each other"
"Student 6 talking to student 5 in Japanese"
"Student 2 asks to tell anecdote, then writes on board"
"Students getting on with task without teacher help"
"Student 4 using dictionary. Teacher discourages this."

Several months after data collection, the completed sheets were used by the three original observers to write up three continuous-prose accounts of the observed lessons. These accounts can be found in the project report.

8.4 To code or (sometimes) not - reasons for a mixed system and post-research conclusions

Any attempt to give the original reasons for a researcher's methodological choices is fraught with danger: some reasons are usually explicit or implicit in a research proposal, but to go beyond this may involve, if not (self-) deception, then at least making clear and simple what was actually fuzzy and multiple. The rest of this section includes what I perceive to be the original reasons, but is perhaps better understood as an account of 'past reasons as presently seen'. I speak only for myself, not for the co-writers either of this paper or of the project report (Gilroy, Fraser, Parkinson & Benson, op. cit.).

The (or some) reasons for not coding on Sheets 1, 3 and 5 are easiest to state. Most important are those given in Section 3 of this paper, especially the seven points from Mehan. It was also important not to overburden the teacher-observers with continuous coding, especially as training time was limited, nor to alienate them by constant use of a system of which they had no 'ownership'. More positively, the open-ended comments allowed them to put things their way, to use their professional expertise, to afford future readers a (very loosely) 'ethnographic' insight into their perspective. Previous experience on a similar project, mentioned above (Davies and Parkinson 1996), had suggested that teacher-observers were less comfortable with coding than with non-coding observation.

The reasons for coding on Sheets 2, 4 and 6 are less clear-cut. They undoubtedly included simple familiarity - doing what seems normal or recognised. More positively, the fact that this was team research provided several reasons: a coding system can perhaps give a clearer focus; can yield more objectivity, or at least intersubjectivity; can help the various researchers to look at and for the same things, to compare

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LESSON CODING SHEET: PAGE 1 (Teacher-dependence/independence)

Lesson No: **Date:** **Teacher:** **Coder:**

Exact Starting Time: **(Take coding times from this).**

5-10 minutes

35-40 minutes

65-70 minutes

Other/General

Note to Coders Make comments for the 5-minute periods specified and optionally for other times where possible. See also paragraph 3 of research proposal.

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LESSON CODING SHEET: PAGE 2 ("On Task")

Lesson No.: **Date:** **Teacher:** **Coder:**
Exact Starting Time: **(coding times start from this)**

	Min	10	11	12	13	14		40	41	42
Name	SecX10	012345	012345	012345	012345	012345		012345	012345	012345
1.										
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										
11.										
12.										
13.										
14.										
(Teacher Led?)										

	Min	43	44		70	71	72	73	74
Name	SecX10	012345	012345		012345	012345	012345	012345	012345
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
(Teacher Led?)									

Key: A = clearly active on pedagogic task, e.g. speaking, writing, thinking.
L = clearly or probably listening (but not A).
R = clearly or probably reading (but not A and not L).
N = doing something apparently not pedagogic, including L1 talk.
O = apparently doing nothing purposive
T = talks in English but clearly not on task (marked form).
Add O in bottom row if an activity is not teacher led, 1 if it is
? = unclear or not recorded

lessons, to use a common language. The aim of avoiding blandness - see 4(i) - was undoubtedly present, as also was the need to distinguish this observation clearly from the observations for training and/or evaluation also sometimes carried out in General English classes, e.g. with trainees on the Diploma in English Language Teaching. Finally, it was felt that a research report including the 'hard' evidence from coding would be more acceptable and accessible to potential readers, including those in authority.

Final opinions on the research design can be more confidently stated than original reasons. Feedback from readers, including General English teachers and IALS management, was limited but wholly favourable. The opinions of the three observers were sought through informal interview or, in my own case, recorded in a 'researcher's log', and were likewise fairly favourable, as the following agreed summaries show:

> Sue Fraser: "In principle the combination of coding and other methods was fine. In detail the coding sheets didn't match due to changes in timetable".
>
> Cathy Benson: "I thought the combination was very good. Coding is best for dealing with what you've thought about before, the other part leaves room for what you've not thought about before, so both are necessary".
>
> Brian Parkinson: "I felt I tended to skimp a little on the coding (perhaps due to over-familiarity with such systems), relying too much on general impression rather than precise counting. But the system worked well, and would have worked even better if fully used".

For me (as researcher), the mixed design used in the fluency class research now seems the most practicable and also the most valid, avoiding or at least mitigating all the problems listed in Section 4 above, and winning acceptance of conclusions, especially by observed teachers and by funders (management), to an extent which would have been unlikely for a pure coding or pure non-coding approach. This very acceptance, though, may suggest a weakness: such a compromise, consensual approach is unlikely to startle, to challenge, to open up totally new pathways.

9. Overall conclusions

Our paper has illustrated four different approaches to the issue of 'to code or not to code'. None seems to us inherently better or worse; all seem reasonable solutions to a particular set of research needs. Differences in the general context of and motivation for research (e.g. individual versus institutional), and consequently in the envisaged audience, are among many potentially important variables.

All of us have felt the need to incorporate the participants' (i.e. teachers' and/or learners') perspective. We have done this in three main ways: Lacorte by multiple data collection instruments and triangulation; Parkinson mainly by involving the teachers as researchers; Sandhu and Gourlay by two different kinds of ethnographically influenced 'thick description', as well as triangulation. These methods of incorporation seem to us potentially complementary.

Three of us have used some coding: Lacorte during and after observation, Parkinson only during, Sandhu only after. We think we have done so in ways which avoid the worst pitfalls of sociometric coding. The fourth, Gourlay, has offered five arguments against coding at the data collection stage. We all find these arguments valid for research which concentrates on a 'classroom culture', but not necessarily for other types of research, or even for this type at other stages.

Note:

1 The four authors each wrote the section bearing their name, and contributed ideas to the general sections. Brian Parkinson is responsible for the overall structure and final editing.

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