

A Comparison of Quantitative and Qualitative Approaches to Classroom-Based Team Teaching Research

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Abstract

This paper discusses appropriate approaches for the investigation of classroom-based team teaching. Two studies are selected: one of them is a study about team teaching between Japanese Teachers of English (JTEs) and Assistant Language Teachers (ALTs) in English classrooms in Japan based on quantitative approach conducted by Scholefield (1996); the other is a study about team teaching between class teachers and bilingual assistants in primary schools in Britain based on a qualitative approach conducted by Martin-Jones and Saxena (1996). Although Scholefield's statistical data was gathered by means of questionnaires returned from more than 80 JTEs, her conclusion became too generalized and did not focus on specific issues. In contrast, Martin-Jones and Saxena analysed only two classroom observations. They carefully investigated not only the classrooms themselves but also the surroundings. As a consequence, the issue of the relationship between the class teachers and the bilingual assistants was clearly identified. As a result of investigating these two studies, I have concluded that the qualitative approach seems to be a much more appropriate means to explore the complexities of classroom-based studies.

Introduction

1. The Objective of this Study

The main focus of this study is the debate between quantitative and qualitative approaches to educational research. Although the positivistic approach is the norm in the natural science field, this study will investigate which type of method is more appropriate in the educational research field of team teaching. Two studies dealing with this similar topic are selected: one of them is a study about team-teaching between JTEs and ALTs in English classrooms in Japan based on quantitative approach conducted by Scholefield (1996); and the other is a study about team teaching between class teachers and bilingual assistants in primary schools in Britain based on qualitative approach conducted by Martin-Jones and Saxena (1996). These two studies will be analysed and examined to see which approach is more suitable when investigating the complexities of classroom-based research. Before moving on to **Section 1** addressing the paradigms of research, I will provide a brief explanation of positivism and interpretivism.

2. Positivism and Interpretivism

What is educational research? Educational research is a type of systematic inquiry. Hitchcock and Hughes (1995: 16) note that "a major assumption has been that this systematic inquiry must also be scientific in the same way in which we see physics or biology as being scientific". Researchers in this field are usually called 'positivists' and are often active in the natural/ physics science area. This research stance is normally called the 'positivistic' approach. However, there are other types of researchers who are called 'interpretivists'.

Hitchcock and Hughes (1995: 16) present these “as ‘anti-positivistic’, or adopting a naturalistic stance, or post-positivist position” and their research content focuses on “the importance of discovering the meanings and interpretation of events and actions” (Hitchcock and Hughes, 1995: 16). This research stance is called an ‘interpretative’ or ‘qualitative’ approach and these methods are often seen in the social science field.

3. A Metaphor of Positivists and Interpretivists

Spradley (1980 as cited in Hitchcock and Hughes, 1995) expresses the difference clearly between the positivists and interpretivists referring to a metaphor of petroleum engineers and explorers. According to his theory, positivists are more like petroleum engineers and interpretivists seem to be explorers. Hitchcock and Hughes (1995) summarize the contrast between petroleum engineers and positivists follows:

... the social scientist, like the petroleum engineer, knows what he is looking for, how to look for it, and what to expect. Like petroleum engineers the social scientist works in a linear, sequential, or step-by-step fashion (Hitchcock and Hughes, 1995: 17).

In contrast to the petroleum engineer, the explorer is described as follows:

Spradley (1980) describes the explorer who is trying to map an

uncharted wilderness, with little or no prior knowledge of the area. Whereas the main aim of the petroleum engineer's work is the discovery of oil, the explorer's main task is the description of that which is found (Hitchcock and Hughes, 1995: 17-18).

The first section will now address in greater detail the paradigms relevant to my future investigation of team teaching research.

Section 1: A Paradigm of the Research

1. Quantitative and Qualitative Paradigms

This section demonstrates two significant paradigms in educational research: the quantitative and qualitative paradigms. Linn (1990) explains brief features of quantitative and qualitative approaches as follows:

Quantitative methods are generally associated with systematic measurement, experimental and quasi-experimental methods, statistical analysis, and mathematical modes. Qualitative methods, on the other hand, are associated with naturalistic observation, case studies, ethnography, and narrative reports (Linn, 1990: 1).

The more specific differences of the two approaches will be analysed in the next part.

1-1 Assumptions of the Paradigms

Creswell (1994: 5) explores the quantitative and qualitative paradigms based on five assumptions: (A) ontological, (B) epistemological, (C) axiological, (D) rhetorical, and (E) methodological

assumptions (these are noted in **table 1** on the next page). His presentation, which is based on work by Firestone (1987), Guba and Lincoln (1988) and McCracken (1988), helps us to understand the two different paradigms more specifically according to each assumption. This section will describe the quantitative and qualitative paradigms in detail according to Creswell's five assumptions.

Table 1: Quantitative and Qualitative Paradigm Assumptions (Creswell, 1994: 5)

Assumption	Question	Quantitative	Qualitative
[A] Ontological Assumption	What is the nature of reality?	Reality is objective and singular, apart from the researcher	Reality is subjective and multiple as seen by participants in a study
[B] Epistemological Assumption	What is the relationship of the researcher to the researched?	Researcher is independent from that being researched	Researcher interacts with that being researched
[C] Axiological Assumption	What is the role of values?	Value-free and unbiased	Value-laden and biased
[D] Rhetorical Assumption	What is the language of research?	[1] Formal [2] Based on set definitions [3] Impersonal voice [4] Use of accepted quantitative words	[1] Informal [2] Evolving decisions [3] personal voice [4] Accepted qualitative Words
[E] Methodological Assumption	What is the process of research?	[1] Deductive process [2] Cause and effect [3] Statistical design – categories [4] Context-free [5] Generalizations leading to prediction, explanation, and understanding [6] Accurate and reliable through validity and reliability	[1] Inductive process [2] Mutual simultaneous shaping of factors [3] Emerging design-categories identified during research process [4] Context-bound [5] Patterns, theories developed for understanding [6] Accurate and reliable through verification

SOURCE: Based on Firestone (1987); Guba & Lincoln (1988); and McCracken (1988).

1-1-1 Ontological Assumption

Hitchcock and Hughes define the term ‘ontology’ as that which “refers to issues concerning *being*” (1995: 19). The ontological question by Creswell (1994: 5) is “What is the nature of reality?” The answer

given by quantitative researchers is that “reality is objective and singular, apart from the researcher”, whereas the stance adopted by qualitative researchers maintains that “reality is subjective and multiple as seen by participants in a study.” The two types of researchers’ opinions stands in extreme contrast to each other, an example of this being that reality is regarded as an ‘objective’ concept by the quantitative researchers yet ‘subjective’ by the qualitative researchers. This is a main area of controversy. Also, reality is conflictingly viewed as being “singular” by the quantitative researchers and “multiple” by qualitative researchers.

1-1-2 Epistemological Assumption

The ‘epistemological question’ is defined as one which “surround[s] the question of *knowing* and the nature of knowledge” (Hitchcock and Hughes, 1995: 19). The epistemological question as put forward by Creswell (1994: 5) asks: “What is the relationship of the researcher to the researched?” The answer to this from quantitative researchers states that the “researcher is independent from the being researched.” In contrast to this, the stance commonly taken by qualitative researchers is that the “researcher interacts with that being researched.” These research stances seem to be completely different to each other.

1-1-3 Axiological Assumption

According to Creswell (1994), the contribution of the axiological issue concerns that of the values in a study and this is related to the epistemological assumption. The axiological question put forward by Creswell (1994: 5) is to ask: “What is the role of values?” The answer

by quantitative researchers is “value-free and unbiased”, whereas, that of qualitative researchers is “value-laden and biased.” It is clear from my analysis that two research approaches involve the controversial judgment concerning issues of value and bias. To argue that this value itself can be excluded entirely from research is in itself a value-based judgment.

1-1-4 Rhetorical Assumption

The rhetorical assumption highlights the language itself used in both research areas. The rhetorical assumption asks: “What is the language of research?” The answers are divided into four sets: the first set of answers is ‘formal’ according to quantitative researchers and ‘informal’ according to qualitative researchers; the second set of answers is ‘based on set definitions’ from the quantitative approach and ‘evolving decisions’ from the qualitative approach; the next set of answers concerns ‘impersonal voice’ from a quantitative aspect and ‘personal voice’ from a qualitative aspect; the final set of answers concerns the ‘use of accepted quantitative words’ in the quantitative stance and ‘accepted qualitative words’ in the qualitative stance. Accordingly, it is clear that quantitative and qualitative research contain very different language styles. However, in fact, those different language styles are mediated and most research is expressed in formal terminology.

1-1-5 Methodological Assumption

Methodology is explained as “the whole range of questions about the assumed appropriate ways of going about social research”

(Hitchcock and Hughes, 1995: 20). More specifically, "methodology is therefore, a theory or an analysis of how research should operate" (ibid: 20). Creswell's methodological assumption asks: "What is the process of research?" There are six sets of answers as follows: (1) 'deductive process' by the quantitative researchers and 'inductive process' by the qualitative researchers; (2) 'cause and effect' concerning the quantitative stance and 'mutual simultaneous shaping of factors' concerning the qualitative stance; (3) 'statistical design - categories isolated before study' deal with the quantitative approach and 'emerging design - categories identified during research process' deal with the qualitative approach; (4) 'context-free' as seen by quantitative researchers and 'context-bound' as seen by qualitative researchers; (5) 'generalizations leading to prediction, explanation, and understanding' from the quantitative viewpoint and 'pattern, theories developed for understanding' from the qualitative viewpoint; (6) the final set of answers is 'accurate and reliable through validity and reliability' referring to the quantitative stance and 'accurate and reliable through verification' referring to the qualitative stance.

The methodologies of the two approaches are very different, as we have seen. In fact, Cohen, Manion and Morrison (2000: 2) point out that "different research paradigms are suitable for different research purposes as questions."

2. The Examples of Quantitative and Qualitative Approaches

The next section will investigate the examples of quantitative and qualitative approaches. Two pieces of research are selected addressing

a similar topic; one of them is about team teaching research between Japanese teachers and native-speaker ALTs in English classrooms in Japan based on a quantitative approach conducted by Scholefield (1996); and the other is research about team teaching between class teachers and bilingual assistants in primary classrooms in Britain based on a qualitative approach conducted by Martin-Jones and Saxena (1996). These two studies will be analysed according to Creswell's quantitative and qualitative paradigm assumptions and examined as to which approach is more suitable when investigating classroom-based team teaching research.

Section 2: Quantitative and Qualitative Research about Team Teaching

1. The Outline of the Two Studies

Two studies are selected which represent the quantitative and qualitative approaches: one of them is entitled "What Do JETs Really Want?" conducted by Scholefield (1996) based on a quantitative approach; and the other is entitled "Turn-Taking, Power Asymmetries, and the Positioning of Bilingual participants in Classroom Discourse" conducted by Martin-Jones and Saxena (1996) based on a qualitative approach. Scholefield's study was carried out in secondary English classrooms in Japan, whereas Martin-Jones and Saxena's study was conducted in primary classrooms in Britain. Although these studies were researched in different countries, both studies deal with a similar topic, that of team-teaching in the classroom. The next part will look at the outline of the two studies more specifically and identify the similarities between the two topics.

1-1 Team Teaching Study in Secondary English Classrooms in Japan

Scholefield's study focuses on team teaching between Japanese teachers and native-speaker ALTs* in English classrooms in Japanese secondary schools. Since her article was published in a journal in Japan which targeted language teachers working in Japan, the background of her study is not described for general readers in the educational field. In contrast, Tajino and Tajino (2000), who investigated the same research field, illustrated how team teaching with a native English speaker was introduced to the language classroom in Japan, which has typically been seen as teacher-centred and also examination-dominated. Their research was published for a wider audience. According to Brumby and Wada (1990, cited in Tajino and Tajino, 2000: 4), 'team teaching' is defined as "a concerted endeavour made jointly by [the JTE and the AET*] in an English language classroom in which the students, JTE, and the AET are engaged in communicative activities." The aim of team teaching with the ALT in the Japanese English classroom is to improve the students' communicative abilities, particularly speaking and listening because these are central to communicative competence, to the development of inter-personal relationship and because ALTs assist in the teaching of these activities.

*Scholefield (1996) explains that although the term AET (Assistant English Teacher) is frequently used, she uses ALT (Assistant Language Teacher) throughout her article because it is the term which the Ministry of Education (2002) has adopted. The abbreviation ALT includes teachers who teach not only English but also Chinese, French, German, Korean and Spanish. For the purposes of this study and because of the confusion of abbreviation in the literatures, only the term ALT will be used.

This leads us to explain this relationship in detail. Scholefield (1996: 7), in fact, discusses this issue in terms of "the role of the ALT, and the type of ALT best suited to team teaching in Japan." Two ALTs were involved in her study and one of them was Scholefield herself. In her project lasting two years, a survey was conducted in 31 junior high schools which the two ALTs visited, with the use of 86 evaluation sheets in the form of questionnaire. The purpose of the research was to investigate ALTs' strengths and weaknesses in their role and to find out in what ways the ALTs could better collaborate with the JTEs (Scholefield, 1996).

1-2 A Team-Teaching Study in Primary Classrooms in Britain

Martin-Jones and Saxena (1996) focus on the relationship between class teachers and bilingual assistants in primary classrooms in Britain. They describe the background of their study which is based on recent educational policies in Britain. In the last few decades, the acceptance of cultural diversity has been the key focal point in British educational policies and as a consequence of this, language education has paid attention to among other issues, minority students' languages. In practical terms, this has involved the introduction of bilingual teaching assistants working alongside monolingual English-speaking teachers (Martin-Jones and Saxena, 1996). However, bilingual support seems to be performed mainly in primary schools because the purpose of this provision is that of "facilitating minority-language students' social transition to school and eventual access to an English medium education" (Martin-Jones and Saxena, 1996: 105). Although national educational policies exist, the local implementation is often different

from school to school. However, Martin-Jones and Saxena (1996) argue that bilingual assistants are usually regarded as being in low-status positions compared to the class teachers in the classroom and the class is mainly dominated by the monolingual English-speaking teacher.

The aim of Martin-Jones and Saxena's (1996) study is to investigate classroom discourse and highlights the relationship between class teachers and bilingual assistants. They analyse two different types of classes in different schools: one of them is a primary science class in which the bilingual assistant is positioned in a rather low status; and the other a storytelling class in which the bilingual assistant is positioned in a relatively higher status. Martin-Jones and Saxena (1996) critically examine the two classroom discourses and compare the differences of the two class teachers' teaching policies in terms of using the bilingual support.

1-3 Similarities of the Two Studies

Although these two studies take place in different countries and different classroom settings, there are some similarities: one of them concerns the language and the other is role of team teaching. Although Martin-Jones and Saxena do not employ the exact word 'team teaching', the issues concerning both studies are quite similar, i.e. the relationship between the two teachers in a classroom: one of them is the teacher who is in charge of the whole classroom (the JTE and the class teacher), and the other the language assistant (the ALT and the bilingual assistant). However, although these two studies deal with a similar topic, they take different research approaches. For this reason,

these two studies have been selected for the purpose of discussing the appropriateness of their chosen methodologies. These similarities and differences are illustrated in **Table 2**. The similarities are highlighted and the differences remain unhighlighted.

Table 2: Comparison of the Two Studies

Category	Scholefield's study	Martin-Jones and Saxena's study
(1) Country	Japan	Britain
(2) Classroom	English classrooms in secondary schools	Science and storytelling classrooms in primary schools
(3) Topic	Team teaching between JTEs and ALTs	Team teaching between CTs and BAs
(4) Two teachers roles	JTE: responsible for a whole English classroom including 4 language skills ALT: assists in the teaching of English communicative activities	CT: responsible for a whole classroom including every subject. BA: assists in the general teaching activities by the bilingual learners
(5) Methodology	Quantitative approach: based on a questionnaire collected from 86 JTEs working in 31 junior high schools	Qualitative approach: based on two classroom observations; (1) primary science classroom, (2) story telling classroom in different schools

JTE= Japanese Teacher of English, ALT= Assistant Language Teacher

CT= Class Teacher, BA= Bilingual Assistant

2. The Methodologies and Discussions of the Two Studies

Although Creswell suggests five assumptions (see Table 1, p. 5 in detail), the methodologies consider the whole process of the studies (Creswell, 1994). Also, since the main focus of this study is the comparison of the quantitative and qualitative approaches, the methodology is the most significant part. For this reason, the methodologies of the two studies are mainly discussed in this part, according to Creswell's methodological assumption (Table 1, E).

2-1 Scholefield's Quantitative Approach

Scholefield's (1996) study is based on a questionnaire called 'ALT Evaluation Form' (see Appendix 1 in details) distributed in 31 junior high schools involving 121 JETs who worked with the two ALTs including Scholefield herself. Six open-ended questions which evaluate the ALT are as follows:

1. Strong points (of the ALT's teaching, of the visit in general).
2. Weak points.
3. Suggestions for improvement.
4. What impressed the students the most.
5. What impressed the teachers and administrators the most.
6. Additional comments. (Scholefield, 1996 :9)

The number of the items cited and percentage of the total replies in every category are shown in tables (Scholefield, 1999) (see the examples in Table 3 and Table 4). Then she discusses each category according to the statistics.

She makes various valid conclusions from the gathered statistical analysis which are directly related to the classroom practices addressed in the questionnaire, and she states the importance of “internationalization, which stresses common humanity as well as the understanding of cultural differences” (Scholefield, 1996: 21). Finally, she concludes that “clear communication and friendly, flexible approaches from both ALTs and JETs will foster successful team teaching” (Scholefield, 1996: 22).

Table 3: Strong Points of the ALT's Teaching and/ or Visit
(Scholefield, 1996: 10)

Strong point	Number of items cited	%
Teaching strategies	[n= 105; 46.5%]	
Clear pronunciation/ simple vocabulary & syntax	29	13
Interaction with students	14	6.3
Teaching skill [not further specified]	13	5.8
Gestures & expressions	8	3.6
Interesting self-introduction [not further specified]	8	3.6
Visual aids	8	3.6
Realia	7	3.1
Student management [including praise]	6	2.7
Use of Japanese	5	2.2
Humour	3	1.3
Previous teaching experience	3	1.3
Equal involvement of JTE & ALT	1	0.4
Student response	[n= 57; 25.6%]	
Increased motivation	18	8
Enjoyed English class	17	7.6
Understood/ were understood by ALT	17	7.6
Felt relaxed	3	1.3
Liked ALT	2	0.6
ALT's personality/ appearance	[n= 28; 12.5%]	
Friendly/ kind/ nice/ polite approach	18	9
Enthusiastic/ positive/ cheerful approach	4	1.8
ALT's smile	3	1.3
Flexible approach	2	0.9
ALT's eye & hair colour	1	0.4
Lesson content	[n= 33; 9.4%]	
Cultural information	12	5.4
Listening practice	4	1.8
Games	3	1.3
Variety of activities	2	0.9
Live example of different language/ culture	12	5.4
Total	223	99.6

Note: 86 of 86 responded. Because of rounding, the percentage total does not equal 100%.

Table 4: Weak Points of the ALT's Teaching and/ or Visit
(Scholefield, 1996: 11)

Weak point	Number of items cited	%
Problems not related to lessons	[n= 16; 41%]	12.8
1-shot system unproductive [not further specified]	5	10.3
1-shot ALT hard to accept by students & JTEs	4	5.1
Inadequate preparation time	2	2.6
ALT not ready	1	2.6
ALT tired	1	2.6
ALT's staffroom behaviour	1	2.6
ALT system has too much paperwork	1	2.6
Distance of school from ALT's office	1	2.6
ALT's teaching	[n= 15; 38.5%]	
ALT didn't speak with all students	3	7.7
Unclear/ non-American pronunciation	2	5.1
Difficult vocabulary/ syntax	2	5.1
Insufficient written work	2	5.1
Student management	2	5.1
Errors in cultural information	1	2.6
Not enough Japanese used	1	2.6
Realia	1	2.6
Too much Japanese used	1	2.6
Students reactions	[n= 8; 20.5%]	
Decreased confidence	2	5.1
Students couldn't understand	2	5.1
Ability range in class not met	1	2.6
Student proficiency too low for communication	1	2.6
Students noisy	1	2.6
Students tense	1	2.6
Total	39	100.3

Note: 32 of 86 responded. Because of rounding, the percentage total does not equal 100%.

Discussion

Some parts of Scholefield's (1996) conclusion are directly related to the statistics which were drawn from the questionnaire. Analysing

these conclusions, she seems to be rather extreme in her conclusion that the statistical results can suggest the need for “internationalization”. It is surprising because “internationalization” is not addressed in the questionnaire at all. It is this jump from methodological-based conclusions to subjective opinions about social issues that opens her research conclusions to the accusation of not being sufficiently “value-free and unbiased” (Creswell, 1994: 5) as required in quantitative studies. This is fundamentally the use of the wrong assumptions for the nature of the research she has undertaken.

Furthermore, from a methodological viewpoint, the quantitative approach should be noted as being “accurate and reliable through validity and reliability” (Creswell, 1994: 5). However, Scholefield does not seem to regard her own data as entirely reliable as can be seen in her interpretation of the JTEs’ responses:

The quality of the data was occasionally marred by difficulty in understanding the English written by the JTEs, who might have written more expansively had the option of replying in their L1 been available (Scholefield, 1996: 9-10).

She attached an example of one ALT’s evaluation form written by a JTE (see **Appendix 1** in detail). She collected more than 80 evaluation forms from the JTEs and interpreted the large amount of data to produce her statistics, which can be seen in

the example in **Table 3** and **Table 4**. Although she converts this data into statistical results in the tables, the interpretative process seems to be more qualitative than quantitative. How this qualitative process was conducted remains unclear. Some sort of reduction of questionnaire responses has clearly taken place, yet it is not stated whether the researcher undertook a “phenomenological analysis” by identifying “units of relevant meaning” (Cohen and Manion, 1994: 292-296) to her original research questions, or a coding system was employed (Cohen and Manion, 1994). In defense of this lack of clarity, Linn (1999) argues that, although the quantitative and qualitative approaches are very different, the borders between the two approaches are not always explicit. For this reason, Scholefield’s study could be seen as a mixture of quantitative and qualitative approaches, but her study based on statistical data is possibly much more of a quantitative nature. However, it is nevertheless important to show how she at least reduced the great quantity of data to produce quantitative statistics.

In terms of “validity and reliability”, the questionnaire itself is not an appropriate method of investigating the team teaching situation in depth. According to Scholefield (1996), the board of education required JTEs to answer the ALT Evaluation form. The board of education plays a supervisory role for all schools in the area, so in this case, many JTEs presumably thought that it was preferable to answer diplomatically. In fact, Scholefield (1996) indicates that although there is a 100 percent responses

rate concerning strengths there is less than 40 percent response rate concerning weaknesses. Although some JTEs might think that there were many more strengths than weaknesses about team teaching, it was possible that the JTEs were trying to be polite to the ALTs and their local education authority.

In attempting to clarify the behavioural issue, Hofstede (1991) has drawn attention to the psychological distance between superior and subordinate as being different depending on people's nationalities. Relating this concept to the Japanese setting, there are possible concurrences with the work of Doi (1971 and 1985) and Nakane (1973). As Nakane (1973) describes, Japanese society is based upon 'vertical relationships' which require much reciprocal respect to be shown between members of differing status. Doi (1985: 35-47) explains the nature of Japanese behaviour as expressed in the concept of "tatemae", which refers to the superficial face employed in everyday relations, especially concerning superior-junior relationships. Returning to the research undertaken in Scholefield's study, it must be noted that the researcher, an Australian, may not have been aware of the same sense of social obligations in the Japanese setting when evaluating relationships operating in her study.

Finally, Scholefield's (1996: 22) closing conclusion that "clear communication and friendly, flexible approaches from both ALTs and JTEs will foster successful team teaching" is quite

broad and too general. Although “generalizations” (Creswell, 1994: 5) are one of the significant features of quantitative approach, too many generalizations seem to blur the point of the issues which should be discussed in this case.

2-2 Martin-Jones and Saxena’s Qualitative Approach

In the beginning of Martin-Jones and Saxena’s article, they clarify the situation for bilingual learners and the government’s educational policies related to ‘language support’. Martin-Jones and Saxena (1996) indicate that the official policy recommends English language educational provision for bilingual children within the mainstream classroom rather than separately from other subjects. Then the role of the ‘bilingual resource’ who is a person to “help with the transitional needs of non-English speaking children starting school” (DES, 1985: 407, cited in Martin-Jones and Saxena, 1996: 108), is presented by the government as follows:

We would see such a resource as providing a degree of continuity between the home and school environment by offering psychological and social support for the child, as well as being able to explain simple educational concepts in a child’s mother tongue, if the need arises, but always working, within the mainstream classroom and alongside the class teacher (DES, 1985: 407, as cited in Martin-Jones and Saxena, 1996: 108).

Although national educational policies exist, Martin-Jones and

Saxena (1996) argue that there are various types of practices depending on local education authorities and schools. They also note that even in the same local education scheme, the implementation can often be different from school to school. Martin-Jones and Saxena (1996) undertook ethnographic work at two schools which are situated in the same city of Blackburn, an industrial town located in northwest England, for almost three years. There is a large number of families of Pakistani or Indian origin living in the area. For this reason, a majority of the students in both schools are of South Asian origin. Martin-Jones and Saxena's study (1996) was based on two classroom observations in different schools. In addition to the classroom observation, they interviewed both class teachers and inquired into their policies on bilingual support.

From their analysis of the classroom discourses, Martin-Jones and Saxena (1996) point out that the two teachers' approaches are different in terms of bilingual support. One of the class teachers, for example, considers that concepts should be introduced in the children's mother tongue first, yet another class teacher believes that this should be presented in English. Finally, their study concludes that bilingual assistants are regarded "as marginal to the main action of the class and at the same time, the bilingual resources they brought to the classes were contained within a primarily monolingual order of discourse" (Martin-Jones and Saxena, 1996: 121).

Discussion

In the main part of their article, Martin-Jones and Saxena (1996) used the actual classroom discourses which were videotaped at the two classrooms. They adopted this methodology "because it is a 'telling' example" (Martin-Jones and Saxena, 1996: 112). Unlike Scholefield's study, they did not use statistics, employing instead "emerging design" (Creswell, 1994: 5). Also, although they examined only two classrooms, the data offered "rich 'context-bound' information" (Creswell, 1994: 7), which the quantitative approach cannot achieve. Martin-Jones and Saxena (1996) used seven extracts which illustrate some parts of the actual classroom activities. Here is one of the examples of the extracts from the primary science classroom.

Extract 1

1 CT: <E> right. do you know that this called?

L? : wire

L? : + wire

CT: + wire

5 LL: wire

CT: and these clips on the end are called crocodile clips.

(cause they go) { }like a crocodile like that

L2 : like a dog

CT: like a dog (nauu) crocodile clip

10 CT: Mrs A she'll tell you.

BA: <U> kyaa hai ye <E> clip <U> jo hai ~. ye <E> wire <U> hai...

What is this? This clip. This is a wire. **ye kyaa hai** <E> crocodile the clip in front of it. Look from the front. Here you seen a <U> **dekhaa hai jo paanii mai ~ hotaa hai. Uskejaisii** <E> shape crocodile {which/ it} is found in water? The shope looks like <U> **hai ya dekho. Uskaa muuh kaise uhultaa hai** <E> crocodile that, ok, here, see, it opens like a crocodile's mouth <U> **kaa iase. |wo: ~a|** {making sound} like this.

L?: |wo: ~a|

BA: |wo: ~a| {CT laughing?}

L?: |wo: ~a|

20 BA: <P> **e dekh aise...** <E> crocodile <U> **kii tarah wo: ~a. hai**
Look, like this. 'wo: ~a' like a crocodile, isn't it? naa.
Kyoo kii aise khultaa hai. ye hai <E> crocodile clip... =
 it? Because it opens like this. This is a crocodile clip.

* Refer to **Appendix 2** for the abbreviation and coding

This extract provides information of a lively classroom activity and represents what they termed as “a telling example” (Martin-Jones and Saxena, 1996: 112). Mitchell (1984 as cited in Martin-Jones and Saxena, 1996: 112) concurs with this by stating that “focusing on telling cases is more fruitful in ethnographic work than searching for typical cases”.

In terms of “emerging design” (Creswell, 1994: 5), Martin-Jones and Saxena (1996) conducted two classroom observations. In

one of them, the primary science classroom and the class teacher, Mrs Talbot, believed that “new concepts should be introduced in English” (Martin-Jones and Saxena, 1996: 110). In her class, the children were divided according to their English abilities and the bilingual assistant, Mrs Anwar, only worked with “low ability groups” (Martin-Jones and Saxena, 1996: 11). On the other hand, another class teacher in the storytelling classroom, Mrs Howe considered that “new concepts should first be introduced in the children’s home language” (Martin-Jones and Saxena, 1996: 116). Martin-Jones and Saxena (1996) described how Mrs Howe used the bilingual assistant, Miss Khan, in the storytelling classroom as follows:

...she [Mrs Howe] asked the bilingual assistant to tell a story in Panjabi [the learners’ mother tongue] to small groups of children. The bilingual assistant took each group in turn to a small quiet room adjacent to the class to read the story to the class teacher in English while she did drawings of their accounts on a flip chart (Martin-Jones and Saxena, 1996: 116).

Mrs Howe thought that “all the children should have the opportunity to work with the bilingual assistant” (Martin-Jones and Saxena, 1996: 116). This contrasts strongly with Mrs Talbot’s practice in the primary science classroom where the bilingual assistant always worked with low ability groups of children.

These different policies in the two teachers' classroom management approaches have been clearly exemplified in their ways of positioning the bilingual assistants. Mrs Anwar, for example, "sat alone with the children in one corner of the classroom" (Martin-Jones and Saxena, 1996: 112); in contrast, Miss Khan was asked "to sit beside her [Mrs Howe] in front of the whole class" (Martin-Jones and Saxena, 1996: 116).

From these analyses Martin-Jones and Saxena (1996) have drawn attention to the fact that the two class teachers' views represented "different interpretations of official pedagogic discourses" (Martin-Jones and Saxena, 1996: 120). They concluded that their investigation showed "how these processes were shaped by power asymmetries and by monolingual teachers' views about 'bilingual support'" (Martin-Jones and Saxena, 1996: 120). Their research process would appear to be what Creswell (1994) suggests as one of the features of the qualitative approach, that of "emerging design - categories identified during research process" (Creswell, 1994: 5), which is in contrast to the "statistical design" of the quantitative approach.

Conclusions

1. Quantitative and Qualitative Research about Team Teaching

This study focused on the quantitative (i.e. positivistic) and qualitative (i.e. interpretative) approaches to classroom-based team teaching research. In particular, it has referred to the work of Spradley (1980, as cited in Hitchcock and Hughes, 1995) who

illustrates the difference between the positivists and interpretivists using the metaphor of petroleum engineers and explorers. According to his theory, the positivists pinpoint that they expect to make discoveries like petroleum engineers: in contrast, the interpretivists describe what is found out in the area as being like the work of explorers.

Scholefield's study (1996) on team teaching between JTEs and ALTs in English classrooms in Japan was based on a quantitative approach. Like the petroleum engineer, Scholefield pinpointed some issues related to team teaching such as strengths, weaknesses, and suggestions for improvement. Questionnaires were sent to more than 100 JTEs in total over a two-year period and attempted to provide more depth to the outlined issues by using "static design" (Creswell, 1994: 5). However, her conclusions became too generalized and did not focus on specific issues.

In contrast, Martin-Jones and Saxena's study (1996) about team teaching between class teachers and bilingual assistants in primary classrooms in Britain adopted a qualitative approach. Although they analysed only two classroom observations, their study carefully investigated not only the classrooms themselves but also the surroundings like explorers. Interviewing the class teachers and asking them about their classroom management policies, for example, exhibited a different approach to that of Scholefield's study. Unlike Scholefield, Martin-Jones and Saxena

did not identify specific issues from the beginning but allowed their study to employ “emerging design” (Creswell, 1994: 5). This means that Scholefield’s methodological approach was created in order to verify her assumptions, in contrast to Martin-Jones and Saxena who entered their study without such assumptions. As a consequence, the serious issue involving the relationship between the class teachers and the bilingual assistants was clearly identified.

McCracken (1988) indicates that the purpose of the qualitative approach is not to find out numbers and percentage and asserts that “qualitative research does not survey the terrain, it finds it” (McCracken, 1988: 17). The researcher also emphasises that the qualitative approach is “much more intensive than extensive in its objectives” (McCracken, 1988: 17).

2. Qualitative Approach in Classroom-Based Research

As Hitchcock and Hughes (1995: 26) suggest, “what goes on in our schools and classrooms is made up of complex layers of meanings, interpretations, values and attitudes”. For this reason, a quantitative approach which mainly focuses on statistics cannot be adequate in investigating complex team teaching situations. Consequently, a qualitative approach is advocated in this paper as being much more appropriate when exploring the complexities of classroom-based studies. Further research related to classroom-based team teaching studies should therefore be conducted by means of a qualitative approach.

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Appendices

Appendix 1: * Sample of AET Evaluation Form(Scholefield, 1996: 25)

AET Evaluation Form

Name of School:

Municipal K J. H. S.

Date of Visit: May 28, 1993

1. Strong points: (of the AET's teaching)

The first, the color of her eyes and hair are different from us. I impressed on the students that they can talk with foreigners. The second, the brief self-introduction and talk about Australian goods is very wonderful. Especially, the students excited Australian dollars and Vegemite.

2. Weak points:

In class, teaching only in English is important. It is very effective to translate difficult words in Japanese in a low voice. But at the lunch time, the students want her use Japanese a little. The first, the color of her eyes and hair are different from us. It impressed on the students that they can talk with foreigners. The second, the

brief self-introduction and talk about Australian dollars and Vegemite.

3. Suggestion for improvement:

At the lunch time, I wish her to talk in English and Japanese, if possible. If so, she will have a much better time with her students and their homeroom teacher.

4. What impressed the students the most:

Her cheerful personality
Australian strange food: Vegemite

5. What impressed the teachers and administrator most:

Her pleasing personality
Her cooperative attitude

6. Additional comments:

Thank you very much for your visit. Our students and I had a very cheerful time with you. Especially, Vegemite at the last visit. Because the students with Ms. O... will be interested in them.

* Note: This form is reproduced unchanged from the original.

Appendix 2: Transcription Conventions (Martin-Jones and Saxena, 1996: 121-123)

CHARACTER FORMAT	
ITALICS	translation of Urdu/ Punjabi into English
NORMAL	transcription for English utterances
BOLD	transcription for U/P utterances
UPPER CASE	indicates louder speech than usual
CAPITAL LETTERS	initial capitals (only used for proper names, language names, place names, title, and months/ days of the week)

SUMBOLS

- < > marks the beginning of an utterance in a different language, i. e. a code switch. e. g.
- <U> marks the beginning of an utterance in Urdu
- <E> marks the beginning of an utterance in English
- <P/U> indicates a) that the utterance could be either language
b) that there is a word internal switch, i. e. across morpheme boundaries
- () indicate unclear item. Sometimes an attempt was made to transcribe the item, e.g. (let him speak); (bo:l̩aa); empty brackets indicate completely unintelligible stretches and their approximate length.
- { } a) curly brackets in the line of speech represent additional information, such Transcribed, e. g. regional language variants like "rollin[g]."
b) curly brackets in the like of translation are used to make a literal gloss
- | | marks phonetic transcription

REPRESENTATION OF SIMULTANEOUS SPEECH

- / / indicates that tow people are speaking simultaneously, but only one can be heard, the one whose utterance has been transcribed.
- // // indicates that more whose utterance has been transcribed. This speaker's utterance has been transcribed.
- L1:+ indicates that two (or more) people start speaking at exactly the same time and can be heard clearly. They utterances were transcribed on different lines.
- L2:+
- BA+ The plus sign represents the simultaneity.

REPREENTATION OF OVERAPS

- = indicates that the turn continues later, at the next identical symbol, or is interrupted by other participant(s)
- ... pause: the number of dots indicates the relative length of each

- pause.
- bc:lɑ one or more colons indicates marked lengthening of the preceding sound.
- ? raising intonation
- ! emphasis: marked prominence through pitch or increase in volume
- L? unidentified learner
- L1, L2 (etc.) learners identified, but not by name
- LL several learners or all learners simultaneously
- BA bilingual assistant
- NN nursery nurse
- ST monolingual support teacher