DOCUMENT RESUME

ED 372 600 FL 022 214

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TITLE Task as a Unit of Teaching Analysis.
PUB DATE Dec 93
NOTE 30p.; Paper presented at the International Conference on Language in Education (Hong Kong, December 16, 1993).
PUB TYPE Viewpoints (Opinion/Position Papers, Essays, etc.) (120) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Classroom Communication; Classroom Environment; Classroom Techniques; Cooperative Learning; Elementary Secondary Education; Foreign Countries; Group Dynamics; *Instructional Design; *Learning Activities; Second Language Instruction; Second Language Learning; *Second Languages; Small Group Instruction; Student Attitudes; *Task Analysis; Time Factors (Learning); Time on Task

ABSTRACT

The concept of "task" is explored, particularly as it relates to the work students perform in learning a language. It is proposed that what really happens as a student learns can be understood better by applying the concept of task to classroom processes. The ways in which task has been defined by educators are reviewed, and it is concluded that the term reflects three aspects of student work: product; conditions (time, classroom environment, task complexity, student grouping, cooperative learning methodology); and operations (memory, application of principles or formulas, comprehension, opinion). Each of these three aspects is examined further, and the influence of student perceptions on each is discussed. The influence of task type (involving discourse; open/closed; one-way/two-way exchange of information) is also considered. A plan for designing classroom instruction involving five stages is proposed. The stages include: identification of a target task relevant to the whole group; establishing the roles of learners and teachers; selecting input and identifying related skills; creating a pedagogic task; and identifying the desired product. Evaluation of classroom tasks by both students and teachers is also seen as an important element of effective instruction. Contains 102 references. (MSE)

Task As a Unit of Teaching Analysis

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Introduction

The common student statement of having "work" to do, is a valid metaphor for the language learning process. Tasks have to be mastered and goals met for the learner to gain fluency and confidence. If the learning burden is too great the student will not benefit as fully as the teacher may anticipate (Nation, 1983). The work or task will run the risk of being an activity where student perceptions of what has to be done do not correlate with teacher expectations (Peterson et al, 1982). The question of what is really happening as a student learns, can be examined by applying the concept of "task" to classroom processes. This can be done by defining task as a unit of teaching analysis, considering the role of the product in a classroom, and examining the influence of processing conditions on task-based learning. Task learning arrangements are also a useful area for analysing what happens in a classroom. A classification of tasks can also include a description of task types in terms of information processing.

Defining Ta .

The classroom question of "What do I do now?" is often heard in the outside world when work has to be done. The parallel construct of schoolwork as a set of tasks that must be processed is used by researchers to describe classrooms. Doyle (1983) has been influential in analysing school processes using work as the main metaphor, linking analysis of cognitive processes outside the classroom setting to the cognition of academic tasks.

With work as the framework he states:

"the term 'task' focuses attention on three aspects of students' work:

a) the products students are to formulate....

b) the operations that are to be used to generate the product

c) the "givens" or resources available to students while they are generating a product....Academic tasks, in other words, are defined by the answers students are required to produce and the routes that can be used to obtain these answers" (Doyle, 1983:161).

Doyle's definition is an economical summation of the concepts of task. His model is paralleled in the second language field by Mohan's (1986) term "activity".

For Mohan "activity is a broad integrating idea relevant to all teaching and learning" (1986:45). This concept involves the linking of content and language, where he points out that communicative language teaching uses general background for the "specific practical side". There is a focus on integrating content and form.

Experience in developing a programme of wide ranging communicative language teaching procedures, known as "The Bangalore project", led to Prabhu's (1987) widely known definition of a task:

> "An activity which required learners to arrive at an outcome from given information through some process of thought and which allowed teachers to control and regulate that process was regarded as a 'task' "(1987:24).

Prabhu's classroom-experience based definition is similiar to Doyle's model in that Prabhu defines task further into "two parallel tasks" and a third component:

a. Pre-task is in the form of a whole class preparatory activity.

b. Task itself is when the students do individual or group activity.

c. Marking and feedback is when concern is with the outcome of the task and the product. (1987:24)

The "givens" are provided, the operations undertaken and the product assessed.

A cross-disciplinary review of task by Crookes (1986) notes the developing utility of the term and for the purposes of his work he defines task as:

> "A piece of work or an activity, usually with a specified objective, undertaken as part of an educational course, at work, or used to elicit data for research" (1986:1).

His first two definitional phrases, that is work with a specific objective, are identical to Long's definition of task as a unit of syllabus design (Long, 1985:89). A particular objective, answer or outcome is central to Breen's (1987) definition of task as:

> "any structural language learning endeavor which has a particular objective, appropriate content, a specified working procedure, and a range of outcomes for those who undertake the task. 'Task' is therefore assumed to refer to a range of workplans which have the overall purpose of facilitating language learning" (1987:23).

Richards (1990) in devoting a section of a chapter entitled "Beyond Methods" to "tasks," notes that tasks "refer to activities that teachers assign to attain particular learning objectives. For any given subject at any given level, a teacher uses a limited repertoire of tasks that essentially define the teacher's methodology of teaching " (1990:39). This point that the tasks or the classroom work of a teacher,

defines methodology will be developed further in this paper by reference to classroom -based research.

In recent work Long and Crookes broaden the claim that task is a unit of analysis that is applicable to all phases of course design. They also note that the emphasis is on something that is done, not something that is said (Long and Crookes, 1992). This emphasis can be seen in practice in a learner-led task based course called "Go for Gold", a business English course run by the language and communication department at the Papua New Guinea University of Technology. It is a long standing and sucessful course which is a working example of a task-based syllabus "designed on the premise of learning by doing" (Hyland and Hyland, 1992).

The reality of these general definitions is a recognition that the work of a classroom, the obtaining of the "answer" is the central organising principle, rather than a teacher chosen decision of what language item is being taught. As early as 1979 Breen, Candlin and Waters pointed out that "it is at the level of tasks that the actual working process of the classroom group is realized in terms of what is overtly done from moment to moment within the classroom" (1979:56).

Task as a term can be applied to target tasks and pedagogic tasks and utilised to analyse the relevance of teaching for learner needs both within and outside the classroom. Nunan (1991) in describing what he and others term task based language teaching (TBLT) writes of the "attempt to link classroom language learning with language activation outside the classroom "(ibid: 279). This defining of the basic concept of task into target tasks and pedagogic tasks is elaborated later in this paper. It is a feature of many ESP programmes which recognise the need to align the language work of a classroom with the language work outside of the classroom. The aligning of the means that learners employ to get answers in the classroom with strategies needed in the community is an area which may well concern those in general English teaching, as well as those in the more specialised areas.

"Activity" or task, which Mohan, Prabhu and Crookes use interchangeably will be analysed further and discussed in terms of the finished work, or the product. Secondly, the routes to the answer, the operations will be described. The influence of the task itself on learning and the conditions will be considered.

A focus on an analysis of teaching will be developed through discussion of effective task types. Task will be analysed using Doyle's framework:

1. Product
2. Givens or Conditions.
3. Operations

Task and the Product.

As a result of task related efforts, students produce a finished piece of work. This is often the main focus for teacher, student and those to whom both are accountable. A student is often asked "Can I see the work you did in class today?" rather than "What did you learn?" The product is frequently the focus of a

classroom, the point of application of a student's cognitive plans (Marx and Walsh, 1988).

A concern for accountability continues to put emphasis on product with many teaching situations showing evidence of behavioural influences (Bloom, 1976; Carter and Doyle, 1982). Related techniques, such as mastery learning and programmed learning call for high rates of success and by their very design, focus on product (Berliner, 1987). Constant success and large amounts of reinforcement can become the main motivating influence on the learning process with the primary focus being on the product. The process is one where "accountability drives the task system" (Doyle, 1983:185), so that analysis of product for the form of work which it demands, becomes important. This is not to deny the much focussed on aspects of the process of learning but clarifies the importance of the "answers" and the everyday classroom reality of the product as an important determinant of work. This will be discussed further in terms of the task product and student perception and the role of the form of the product. Teacher viewpoints of what is going on in a classroom are often subordinate to student perception and how students see their work.

Product and Student Perception

When one focuses on student perception of a product one sees the validity of Doyle's model in that he writes of the "givens," the conditions that affect the product. In achieving the product, the conditions under which the task is done are a major influence on the quality of the product. Much has been written about the physical conditions of learning, yet student attitudes and perception are a critical condition in the quality of learning that is happening.

In analysing the products of learning it is easy to overlook the students' perceptions of the product: that is, "What is this work for?" The concern is not always "What's it about?" but what value is attached to the task. The best teaching expectations, even in the name of learner-centered programmes can be overriden by student perceptions of how the product will be evaluated (Winne and Marx, 1982). How many times as classroom teachers have we heard the question, "But how many marks is it worth? Will it count towards the final grade?"

There can also be differences between the lesson's cognitive objectives from a teacher's viewpoint and students' performance which is often related to student expectations of evaluation (Blumenfeld, Mergendoller and Swarthout, 1987; Anderson, Stevens et al,1988).

Product and Form

A second major aspect in considering the product as a dynamic in task process is the form of the product itself. The work to be done, that is the otaining of an answer or product, will often override student concern with content (Mohan, 1986; Prabhu, 1987).

Blumenfeld, Mergendoller and Swarthout (1987:140), summarize this with "content drives cognition, the form drives behaviour." This is a point that some

contempary classroom material does little to include. That is, the form of the answer and the students expectations of how much work has to be done to get the answer will greatly influence the learning.

The form of the task itself is the mediator between teaching behaviours and learning behaviours. As such Bennett (1988), calls attention to understanding the form of tasks, rather than focusing on prescriptive programmes and overtly structured classrooms.

In cognitive psychology, Anderson (1980), among others, points to the importance of what is produced when performing a task.

> "Continued exposure to tasks of low cognitive complexity and challenge in forms where the information is clearly framed and easily accessible, with products that require little transformation of information and allow for little definition by the student is likely to result in preferences for easy, clearly defined task forms which require minimal time or involvement on the part of the learner." (Anderson, 1980:144).

There are several reasons why the product of a lesson is an important part of task analysis. The product or answer to a teacher-set objective is a major concern for students, who are often concerned with the evaluation of a task. The answer and efforts to find it are related to the students' view of a task, to the extent that the task itself may be a mediator between students' performance and the teacher's expectation.

The form of the product may be considered as an important aspect through the influence of form on the acquisition of language. Few would advocate a return ot *forms* per se as Long and Crookes point out (1992), but the influence of *form* in the processes of language acquistion is well documented. Long and Crookes (ibid) cite work on marked and unmarked forms tranfering to implied marked and unmarked forms (Zobl, 1985) and describe the importance of attention to form in task planning, a somewhat self evident observation for those involved in everyday classroom work.

Classroom research in the context of immersion learning found that involving teaching of form and an analytic approach compliments the experiental approach (Allen, Swain, Harley and Cummins, 1990). The authors describe the experiential approach to teaching as being marked by " a combination of activities marked by group work, broad range of reference, use of extended text, (and) reaction to message rather than code" while classes with an analytic approach involve "relatively more time on whole class activities, form-focussed practice, use of minimal text,(and) reaction to code rather than the message" (ibid:58). Swain and colleagues' study of eight French grade 11 immersion classes was based on classroom observation and addresses pedagogic issues of how attention to form affects outcomes of learning. A correlational analysis related a range of finely differentiated observational variables to learning outcomes or products. The results suggest a place for the analytic focus, that is a focus on form.

"The results of the correlational analysis suggest that core French students benefitted from a generally experiental approach in which relatively more time was devoted to such features as information gap, reaction to message, and topic incorporation. At the same time, there were positive correlations between various form-focused, teacher directed activities and adjusted posttest scores. These results lead us to the conclusion that the analytic focus and the experiental focus may be complementary, and that they may provide essential support for one another in the classroom." (1990:62).

A concern with form has led to discussion in the field of oracy research of the need for balance in tasks that develop accuracy, attention to code, as well as fluency (Murphy, 1991). Fluency tasks need to be balanced by attention to accuracy and form as interaction-based tasks may not create negative input that shows a breakdown in communication and hence a realisation that a form is ungrammatical (White, 1987).

Focus on form is useful in determining that learning is at the level of the learners. With appropriate levels of learning, students will pass through a developmental sequence and extend the scope of rules to more general fluency and production (Pienemann and Johnston, 1987). Long and Crookes (1992) state that "the evidence does motivate a focus on form that is, use of pedagogic tasks and other methodological options which draw student's attention to aspects of the target code" (1992:43). Recent attention to integrating form and interaction can be seen in the recent theorectical writing and textbook production given to presenting grammar from a "new" perspective.

Concern with the answer or product in a learning session is relevant to the student's perception of a classroom, related to the evaluative process and also be relevant, as form affects learning. The product or answer therefore needs to be well integrated with an assessment of students' abilities to attain the product and it needs to be linked to task design which considers conditions of learning.

Task and Conditions

Teacher centred and classroom environmental research suggests that the learning task and the conditions of the work are of importance in understanding classroom interaction (Richards and Rodgers, 1986). Curriculum allocation, more time on task, or improvements in levels of student involvement would not seem fruitful, if the prime concern is not with the tasks themselves (Doyle, 1979; Burns, 1984).

Bennett (1988) has applied consideration of the conditions of a task to his influential work in the British educational system. He describes how learners cope with classroom activities:

> "This perspective assumes that the tasks in which pupils engage, structure to a large extent what information is selected from the environment and how it is processed. Tasks organize experience and thus an understanding of that

experience and the process of acquisition, first requires an understanding of the tasks on which pupils work." (1988:24)

Time on Task

The utility of task as a unit of analysis, can be considered in the light of research on time on task. The field, a readily quantifiable condition for learning, has been widely studied for a considerable period (Carroll, 1963; Denham and Lieberman, 1980; Berliner, 1983; Gettinger, 1984; Gettinger, 1989).

It is found generally that time involved in an academic task affects performance, when measured in terms of academic success.

Studies do not, however, show that increasing time on task will in itself improve results (Frederick and Walberg, 1980; Carroll, 1985). Time is only one factor. In overviews of the work (Bennett, 1982, 1988) a wide variety of results are presented. Time on task is further analysed into the time actually available and secondly into assessing involvement with content (Mohan, 1979) and instruction. When one begins to assess involvement one begins to look at the product and the steps taken to get there; it is an analysis of the work itself, with the activity being of importance (Shavelson and Stern, 1981; Burns, 1984).

Although there are positive relationships between time and learning in Karweit's detailed reviews of studies (cited in Croll, 1988), she emphasises that the task itself and the learning arrangements are critical factors. Gettinger's (1989) study of 118 third grade children reached similiar conclusions by examining time spent on learning and time needed for learning. Results show that it is possible to increase student perserverance but that the "effects of an increase in time spent, however, are not consistent"(1989:89). She notes a need for research on time to focus on factors other than the effects of specific time periods on achievement. The lack of a clear relationship between time and achievement in her findings parallels other work which argues that it is the manner in which time is spent which is crucial to achievement (Anderson, 1981; Wang, 1987). Gettinger cites her work on individual learner differences (1984) to highlight the importance of factors other than time itself; that is the tasks themselves, modes of instruction, learning arrangements and importantly the learners. With the growing awareness of the need for learner-centred programmes it is worthwhile to return to learner perceptions of the role of time spent on tasks in the classroom. Any examination of work in a classroom needs to consider learner perceptions.

Time and Student Perception

Task analysis is focused on the learner if we accept that working with tasks and finding the routes to the answer are the basis of a classroom. We thus come back to the question of what the learner is doing. Peterson and colleagues (Peterson, Swing, Braverman and Wass, 1982) raise questions about the thinking that students use while working. They researched task and student perception during mathematics instruction, and found that achievement correlated more highly with students' self reports of whether they were on task or not, than with classroom data of observable on-task behaviour.

Secondly, achievement correlated with the use of direct instruction and specific cognitive approaches such as semantic mapping (Stahl and Vancil, 1986). The focus moves to the learner in that classroom wide activities were unrelated to achievement. These findings point to the importance of cognitive engagement created by the task as being of more importance than time on task per se. Secondly, Peterson and colleagues note that all classroom processes will involve the learners' perceptions as a vital condition for improving the quality of performance.

Classroom Conditions

Teaching Methodology

The classroom has often been seen as the laboratory for a particular method or teaching style, where the teacher creates the learning environment. Much work exists on what makes an effective teacher (Swaffar, Arens and Morgan, 1982; Brophy and Good, 1986; Doyle, 1986).

Evidence of the usefulness of task as an analytical unit for effective teaching comes from the research of Brophy, Rohrkemper, Rashid and Goldberger (1983), who found that teachers' motivational techniques and concentration on content were unrelated to student engagement. Different methodologies did not correlate with work done.

In a major review of research into teacher planning and instructional modes, Shavelson and Stern (1981) found that a discrepancy exists between the way teachers are trained and what happens in the classroom.

> "Research on teacher planning has found that the instructional activity is the basic unit of planning" (Clark and Yinger, 1979; Peterson et al, 1978; Smith and Sendlebach, 1979; Zahorik, 1975). (1981:447).

Shavelson and Stern suggest that the environment of the classroom and the demands of management lead to decisions about academic work being of prime importance.

Swaffar, Arens and Morgan (1982) (cited in Crookes, 1986), researched the relationship between methods or approaches and actual classroom practice. Teachers using supposedly different methods were found to use similar classroom practices. They found that labels for methodology are not useful. Gaies (1983) states that this finding is an important basis for process research. Bennett (1988:27) cites a recent House of Commons Select Committee Report and its call for a move from analysis of styles to a more valid model for learning and teaching. He concludes that:

> "Research on opportunity to learn, in emphasizing the quantification of time, neglected to characterize the nature and quality of classroom tasks and in common with the teaching styles approach it neglected the process of learning itself."

He calls for a direction of research which Swaffer et al state is important. The clear statement which concludes Swaffar et al's findings in independent support of Shavelson and Stern's study is that:

> "any analysis of methodologies needs to commence in terms of task, order (of tasks) and learning strategies. This is the way we, as foreign language teachers, interpret the pragmatics of the classroom." (1982:32).

This interplay between tasks, task ordering, task types and learning strategies creates a classroom dynamic of conditions.

The Dynamic of Conditions

The basic premise that task creates conditions of learning is not only clarified by considering research on methodology but by also looking at classroom organisation.

In Doyle's (1983) description of task he writes of three areas of concern related to the dynamics of a classroom :

1. Task Design
2. Classroom Management
3. Student Interaction.

The influence of task design will be discussed later in terms of task types. However certain dynamics of tasks in a classroom can be delineated as they provide insights into task design principles. A general summary of Doyle's use of task in assessing classroom dynamics follows:

1. Academic tasks organize students' information processing. Accountability drives the task system.

2. Answering is the task in classrooms. Attention goes to the answering event itself rather than simply to the content.

3. Higher level cognitive processes are difficult to accomplish in the classroom due to ambiguity, risk and class management problems.

4. The knowledge students have of content is "probably embedded in their cognitive representations of the tasks they encounter in classrooms."(Doyle, 1983:186).

5. Due to group dynamics and often public evaluation teachers are under pressure to adjust tasks. (The New Zealand teachers' colloquialism is that "you go for the middle.").

6. Group management and answering will often put the attention on getting the work done rather than on the quality of the work.

7. The amount of work and adaptation to tasks will create pressure to maintain stability in the task system. Familiarity and predictability simplify the task.

8. The classroom itself as a task environment creates difficulties for younger and less able students (ibid :185-186).

This brief summary shows the utility of task. It is beyond the scope of this paper to focus on classroom management and physical conditions of learning. I shall, however, look at the role of learning arrangements, the influence of task types and student interaction with tasks. In Doyle's summation of conditions, he writes of resources for the student. The student's own resources and their capacity to function as effective learners is an area where task analysis is also useful, as one of the main influences on learning is the language, ideas and skills the learner applies to the work.

Student and Task

Students are concerned with working through and completing classwork, or at the worst, devising means of avoiding completion if it is beyond their capabilities. Given that teacher expectation and students' viewpoints can mismatch, it becomes critical that tasks are matched with students' levels in terms of the work itself. The type of task will influence the benefits that can be gained in classroom learning. An analysis of tasks could aid in understanding how students can benefit from the classroom as teacher and students pursue answers.

Previous assumptions of the role of the student have seen them as moving through a lockstep progression in a curriculum or method which is externally prescribed. Bloom's (1956) taxonomy has been widely utilised in not only a descriptive manner.

The framework of setting objectives to move through a pre-determined hierarchy of skills can be compared with the frameworks of Cummins (1982) and Tikunoff (1985).

Cummins describes the common setting where a student needs to function at the teacher-designated level to achieve an instructional objective. He writes of differing skills needed for social interaction and academic success and relates this to different cognitive demands for social-interaction and academic tasks. The focus is on the task itself and context-reduced situations being used in language programmes.

For the language teacher, Cummins highlights the importance of the task itself, its learning arrangement and the demands that a lack of context could place on a less proficient learner.

The learner can be faced with a task where completing the work becomes the main concern to the extent that content becomes less important than completion of the task. If a student's language skills can not meet the task goals then there will be concern with the means of doing the task, rather than interest in the content

(Frymier, 1981). The rush to get the work done could mean less productive use of learning opportunities. Task designers therefore need to create tasks that involve student participation at an appropriate level. The product and the process of getting the answer could be integrated in a learning arrangement which fosters full participation with the routes to the answer.

Interaction with Tasks

Students face many kinds of work in order to succeed in a classroom. The work that they face can be analysed by considering what has to be done in order to complete tasks in the classroom. Theoretical models and field research point to the utility of task as a unit in describing how students interact with classroom work.

Tikunoff (1985) suggests that students are faced with complex demands in order to be in what he calls a state of "functional proficiency". A summary of learning conditions that students need to master is as follows. Students need to:

1. Understand tasks knowing how to complete the product and how to correlate new information;
2. Participate productively in classroom tasks, be on task and observe the norms for the activity, while meeting teacher expectations; and
3. Obtain feedback on task completion as to its accuracy. (1985:19-21)

Tikunoff details the instructional demands of a task with factors that parallel Doyle's work (1979, 1983) by focusing on what a learner needs to know. Tikunoff's model has a concern with the product, an interest in conditions, and an awareness of the importance of the operations. His detailed study analyses class task demands (1985:47-51) with attention to task itself in terms of task complexity and operations, which he describes as interactional mode demands and response mode demands.

Tikunoff's analysis is important because it shows the complex requirements of even a superficially simple task and thus stresses the need for a well thought out programme of initiating learners to a new task type.

Learner-centred task analysis is central to Dale and Cuevas's (1987) study of children's mathematics difficulties and language use. They point out that their examples of children's maths difficulties need more than appraisal of the surface features of a task. The child's level of language skills and the demands placed on them by the specific domain of a maths task are at the core of analysis. The dialogue of the task quoted (1987: 9-10) validates the importance of analysing the task itself, the conditions,- primarily the functional proficiency of the child - and the operations required while the student interacts with the task.

Task as a unit of analysis is central to assessing what happens in terms of time spent in classroom learning. The teacher's expectations of what is happening may differ from student's views yet all are concerned with getting answers to set tasks. Students face many demands in completing the product and task designers need to recognise that useful classroom tasks would see the answers, or outcome

as an integral part, rather than the only reason for a lesson. The product, as important as it is for learners, will only be arrived at if it matters to those concerned.

Students are concerned with the value of an answer. In fact the content of a lesson may be lost in the drive for an answer, so that task design needs to involve full participation from students, in conditions which foster content learning, as well as the discovery of the product of a task.

Task Complexity

Task typology may need to consider task complexity as part of an analysis of learning. Information processing theory delineates how limited processing of concepts can be. If a task has multiple components in both the procedure, the mechanics of the learning arrangements and the product it will be more difficult for learners, than a straight forward path to the answer.

Task complexity can be considered in two major ways which Segal (1982) describes in relation to groupwork.

> "Two dimensions... are (1) the number of goals and (2) the number of paths to these goals (Fielder 1967; Shaw 1976)... A third dimension contributing to the complexity of the task is the amount of specific, unequivocal information given the decision maker." (1982 : 334).

This framework applies to both the procedure of a task and to the input of a task. Brown and Yule (1983) consider task complexity of listening texts and note that difficulty relates to similiar informational factors. The first is the number of elements in the text and how easy or difficult it is to separate them into different concepts. The second element of difficulty is text type, which they elaborate in terms of whether elements are fixed elements or changing dynamic elements and whether the text relates to learner background knowledge. The role of information distribution and the type of information processing in describing tasks is discussed later in this paper. Complexity is also a factor in terms of the "shape" of the answer and the number of components that are involved in the expected product. Of immediate interest is the consideration of classifying language work in terms of how complex the procedures of the task are and how many parts or components the learner needs to work with.

Task analysis, based on the notion of work to be completed, may become more refined if we consider the "thinking" work needed by learners in terms of task procedural instruction, the number of components in the material and the complexity of the answer. Greater cognitive attention given to the number of components in a task will create greater linguistic work even if the language of the task appears simple. Much research needs to be done on this area of task analysis in second language teaching.

The Moderating Variables of Learning Arrangements

Task Learning and Groups

An important condition for fruitful task completion is well organised conditions for learning where the student interacts fully with the task form giving his or her attention to the classroom work. It would appear that any task will be moderated by the framework of the experience in terms of human interaction. Interaction studies suggest a need for attention to classroom learning arrangements as an integral part of task analysis.

Much research in the field of second language learning has focused on the usefulness of group learning arrangements to foster task completion, in ways seen as linked to language acquisition. A learning arrangement conducive to both interaction and language acquisition is the small group (Long, 1975; Long, Adams, McLean, andCastanos, 1976). Oracy behaviours seen as beneficial for language acquisition can occur often in group work (Johnson and Johnson, 1975; Long and Porter, 1985). These behaviours in the form of interaction have been researched in detail. Different forms of discourse can occur in dyads and small groups with the nature of the information exchange being the determinant, an aspect which will be discussed later in this paper. Much of what happens in a classroom will, as suggested earlier, depend on the routes to the answer. The type of learning arrangements are an important modifying influence on how routes to the answer are explored.

Several surveys of the literature (Brumfit, 1984, Van Lier, 1988) and assertions based on teaching experience, highlight the linguistic and pedagogical importance of group activity (Abercrombie, 1970; Schmuck and Schmuck, 1971; Johnson and Johnson, 1975). Earlier concerns were with groups as a management device (Forrester, 1968),or as an extension of essentially teacher-fronted work (Jolly and Early, 1974). The important concern of how linguistically effective group learning arrangements can be has focused on linguistic analysis and the setting for task processes. Using task as a conceptual framework, Long (1989) sums up group work benefits:

* Group work increases the quantity of language practice opportunities.
* Group work improves the quality of student talk in several
* Group activities help individualise instruction.
* Group tasks can help improve the affective climate in the classroom with the intimacy of the small group setting often being especially valuable to shy or linguistically insecure students.
* Group tasks can help motivate learners because of the advantages referred in(1)through (4) (1989:13).

This summary is similar to other authors' statements (Barnes, 1973; Nation, 1975;) and describes positive aspects that are widely known in the SLA field. However groupwork arrangements are only as effective as the arrangements of information that align with the group arrangement and set up useful processing of linguistic information.

Tasks Involving Cooperative Learning

An influence on the learning process is whether the task is worked cooperatively, competitively or in an individualistic way (Slavin,1977). There has been considerable research in social sciences on cooperative, competitive and individualistic means of achieving a goal and obtaining the end product. Specific studies have been carried out in the field of L1 acquisition (Slavin, 1978,1980; Sharan, 1980; Uttero, 1988).

An influential wide ranging review of L1 studies is that of Johnson et al (1981). Their research aimed to resolve the controversy of cooperative learning as opposed to individual competition, by reviewing 122 studies that met their criterion of acceptance. Their meta-analysis considered the variables which may affect the utility of cooperative, competitive and individualistic modes. They came to the following propositions:

* Cooperation is superior to competition in promoting achievement and productivity.

* Cooperation is superior to individualistic efforts in promoting achievement and productivity.

* A tentative assertion is made that cooperation without intergroup competition is better than cooperation with intergroup competition.

* There is no significant difference between interpersonal competitive and individualistic goal structures on achievement and productivity. (Johnson et al, 1981:56-58)

Other classroom research (Johnson and Johnson, 1985; Ellis, 1984) confirms the importance of cooperative learning with some additional conclusions from a student viewpoint:

1. Student motivation of peers is a stronger force than competition.

2. Cooperative learning produces more positive attitudes than competitive or individualistic learning.

3. Self esteem and awareness of other students is higher in cooperative learning situations.

Clearly, there are strong linguistic and pedagogical reasons for considering cooperative learning arrangements. However, these reasons need to be clarified in the light of classroom practise as there are limitations to effective task based work within groups. Given that classroom work is moderated by both the final product and "the how to get there" it is worthwhile to analyse the practise of groupwork, as group-based learning is espoused in recent teaching materials that use the term "task".

Limitations in Small Group Work

Some detailed studies suggest limitations with the implementation of small groups. Gerleman (1987) notes that small groups may not fully acheive their aims. Her observational study of fourth grade mathematics classes found that group activities did not necessarily create equal content learning opportunities for all students. Secondly, control of student behaviour became a problem, with teachers' attention being spread too widely. Management problems would be fewer in pairwork where the grouping retains the features of cooperation within interaction with full student participation, or in group work with systems of individual accountability (Hall and Jacobs, in press).

Participation and performance concern Slavin (1980) in his study of cooperative learning. An analysis of reward structures for a varied range of cooperative techniques shows that the larger the group, the greater the reduction in the degree to which individual performance relates to individual achievement. A group member can cover for lesser effort from another student doing the group activity. Group members may pull each other up with appropriate group rewards, but individual performances can vary in effort and learning.

Slavin notes that group member praise only works on certain tasks, suggesting that group techniques are effective when they focus on structured tasks, high student autonomy and defined individual accountability. This finding links with Doyle's (1983) assertion that accountability drives the task system. It also clarifys an assertion that is often heard in school staff rooms; "He only does enough work to get by". This would suggest that how the learner perceives accountability, whether in groupwork or in individual tasks, is an essential part of task design. One comes close to an ESP approach in aligning the settings for language acquistion with learner awareness of the measurement of successful task completion. This may be accountability within the classroom task, or in terms of a target task outside the classroom, but even the best groups and engaging tasks will only work for the majority by building accountability and feedback into the task design.

Task and Operations

Background

Analysis of school work in recent years has begun to relate to operations generated by the work or task. Research on the work of school tasks has overlapped with psychology's concern with cognitive processes (Anderson,Spiro and Montague, 1977; Calfee, 1981;Chamot and O'Malley, 1987). In many schools this same interest in operations correlating with tasks has led to widespread interest in "process writing " and lead to a concern with the processes of learning that tasks can engender. The aptly named "process" approach is currently widely applied and researched (Graves, 1975, 1983; O'Rourke and Phillips, 1989). There is much practical and theoretical interest in the operations or processes generated by different types of tasks.

Task types and their influence in the process of learning with different kinds of class work has been a feature of some areas of SLA research. Task types may

be considered as a condition of learning yet much of the research has focussed on the operations that various types of task engender. Descriptions based on classroom research into the operations or processes may aid the classroom teacher in designing effective tasks.

A Framework for Analysis of Process

Doyle (1983) focuses on process with a general framework for academic tasks by stating that "Academic tasks embedded in the curriculum can be differentiated in terms of general categories of cognitive operations that are involved in task accomplishment" (1983:162-3). His classification for general academic analysis is relevant to language teaching.

Four types of tasks are described:

1. Memory Tasks are activities in which the student recognises or reproduces previously known items.

2. Procedural or Routine Tasks are activities in which the student applies formulae or algorithms.

3. Comprehension Tasks are activities involving transformation, new procedures or inference.

4. Opinion Tasks are activities in which the student states preferences or values. (1983:163-173)

Doyle's analysis of product, givens and operations with the above types of task classification has contributed to a growing field of research where the concern is learner centred task-based analysis of what the student is actually doing. (Duff, 1986; Mergendoller, Marchman, Mitman and Packer, 1988; Anderson, Stevens, Prawat, Nickerson, 1988).

Analysing task, student and teacher operations has occurred in a wide range of academic areas. Crookes (1986) presents a detailed summary of task characteristics in relation to second language classrooms. In general classrooms, with or without ESL learners, the interplay of task forms and performance is just as observable. An example of task forms influencing performance is discussed in recent American elementary school research. Blumenfeld and Meece (1988) used four science lessons with 194 fourth through to sixth grade students. The lessons varied in the level of cognitive content, procedural complexity and learner arrangements. Using questionnaires, they measured student task involvement, teacher influence and the use of cognitive strategies. They found that cognitive engagement which they defined as "self regulated learning such as attention, connecting (and) planning" (ibid:239), involved more learning strategies in tasks of high cognitive difficulty.

The importance of form was seen, in that procedurally complex tasks involved lower cognitive engagement. Small group work involved less engagement as well. Students' interview responses suggest that what creates interest or

involvement, is related to the procedures or forms of a task, such as graphing or drawing (ibid:246). This raises interesting questions in both the analysis and the productive use of tasks in relation to content. The researchers state that student concern focused on what had to be done, rather than on the content. The outcome itself is seen as being of primary importance in how students perceive classroom work.

The Influence of Task Types on Learner Operations

Discourse Types

Interest in task types and changes in interlanguage in pairwork is central to Crookes and Rulon's (1985) study of native speaker (NS) and non-native speaker (NNS) pairs. The central issue was the quality and quantity of NS"feedback" to NNS. Two "problem solving" tasks were compared with "free conversation". The first task involved partners agreeing on which, out of four items, was "The Odd Man Out." The second involved visual discrimination with a "Spot the Difference" task.

Modification of NNS language by NS feedback was more frequent in problem solving tasks than in free conversation. It was hypothesised, in a variation of the research questions on time on task, that the repetition of vocabulary items and topic areas could be a major factor. In other words, repetition of the same linguistic items may be more important than the nature of discourse generated by a task type. In "Spot the Difference", there were long stretches of topic centred discourse with repetition, but the activity had less effect on interlanguage exchange than the other problem solving task. Designing pairwork or group interaction tasks chiefly on the basis of the quantity of repetitions would not seem fruitful.

Duff (1986) analysed NNS dyads using "problem solving" and "discussion" tasks. She argues for the analysis of the task itself into discourse that centres on "convergent discourse" and "divergent discourse". In convergent discourse, learners have a shared goal in that they are cooperating in processing the same product. Tasks such as free discussion in pairs must, by their very nature, set up different viewpoints for each student. The task would then have "opposite or independent goals for each member" and be "divergent" (ibid:150). Chaudron (1988) describes Duff's findings by analysing the research as that with "task type as an independent variable".

> "Calculating ratios of behaviours to total turns, she found the problem-solving task significantly superior to debates only on (1) the rate of questions posed by the subjects (2) the rate of "referential" questions and the role of confirmation checks."(1988:109).

Duff's results show that convergent tasks lead to more exchanges, more questioning, and a range of checking procedures. It is the task type which creates opportunities for questioning and checking, an aspect of negotiation which may be significant. The length and structure of the exchanges in divergent tasks means fewer possibilities for negotiation, in the form of checks and questions.

These findings are confirmed by Tong-Frederick's (1984) experimental analysis of three different kinds of oral communication. She compared "a goal

directed problem solving" activity, a roleplay,and "authentic/natural" interaction (1984:133) using six pairs of students. The students did all activities. It was hypothesised that the lexical complexity of both a roleplay and a naturalistic activity of finding out what another student had done on the previous day, would lead to a wide range of forms and vocabulary items. Lexis would be limited in the problem solving task as a specific, rather than wide ranging problem was the discussion point. Experimental data contradicted this.

> "In the problem solving activity, there were many instances of students rephrasing, defining the task to their partner, drawing inferences, checking, disagreeing, agreeing, organising, contradicting and evaluating. It was the task type itself which was influential (ibid:142)."

Furthermore students were interviewed and stated a clear preference for this form of pairwork learning in that a cognitive challenge was motivating..

Open Tasks and Closed Tasks

Using the product of a task as the criterion, Long (1989) argues for a fundamental division of pedagogic tasks into "open" and "closed" tasks. Open tasks are those "..in which participants know there is no predetermined correct solution, but instead, a wide (in some cases, infinite) range of acceptable solutions" (1989:24). Open tasks involve consensus and produce "divergent discourse" in Duff's terms.

> "A 'closed task' requires that speakers attempt to reach either a single correct solution or one of a small finite set of correct solutions determined before hand by the designer of the task and again (crucially) known to the participants to have been so determined"(ibid:25).

Long states that closed tasks foster more negotiation as students know that finishing the task involves finding a specific product or answer. Students are extended to find the specific right answer. The answer or product is therefore central to two-way tasks being a principled use of the student perception of classwork, as described when analysing task and the important role of the product.

Information Exchange

The dyad is a face to face setting where information can be exchanged. Tasks can be examined in the light of how ideas are exchanged. Long (1980) defines a "two-way task" as one where students hold different information which must be shared to complete the activity. This technique has been given various names - dycoms (Byers, 1973); jigsaw groups (Aronson et al, 1975); two-way information gap tasks (Doughty and Pica, 1986); and split information technique (Nation and Thomas, 1988).

Two-Way Tasks Compared to One-Way Tasks

"Two-way" tasks involve exchanges of information in which both participants have unique information which must be shared to process the task (Gass and Varonis, 1985; Nation and Thomas, 1988) in contrast to "one-way"tasks. Often in one-way tasks, one learner or the teacher holds all the information and has to convey it. Roles are defined by the nature of one-way tasks as passive and active users of language at one extreme or at the best, a situation of exchange and turn imbalance. Much teacher-fronted teaching involves tasks of this type. Two-way tasks produce interactional features that differ from one-way tasks.
A critical consideration in analysing tasks in this way is the influence that the information distribution has on interaction and talk which could link to language acquistion.

Long (1980) analysed the amount of interactional changes in both one -way and two-way tasks by analysing discourse in dyads. He compared the discourse of 16 NS-NSS dyads with NS-NS dyads. Interactional features in the form of checks, repetitions and requests occurred in both one-way and two-way tasks. There were, however,greater differences between NS-NS and NS-NSS conversation in the two-way tasks. It could be argued that the native speakers, working with a need to process a specified product, had to modify their language to complete the task. In other words, the holding of specific unique information and a convergent discourse structure (Duff, 1986) may have led to the NS modification and negotiation.

Pica and Doughty (1985a) support Long's findings with an analysis of teacher-fronted discussions compared with discussions of small groups. Each group was of four learners. The tasks were values based activities which are not uncommon in communicative methodology, (Brumfit, 1980; Ellis, 1984b). Tasks involved reaching a consensus. In the small group the students had to decide which of the designated twenty-first century families could best adopt a child. Learners shared the same information and the researchers suggested that as students did not hold unique information, they did not have to participate equally or make all their language clear.

This is a finding which many classroom teachers would agree with and it may account for the reluctance of some teachers to use small groups. Johnson and Johnson (1985), describe the lack of use of small groups, noting the management and involvement problems which may have more to do with task types than with classroom management. A personal observation is that a shy student will not take part in group processes if they "don't really need to do all the work".

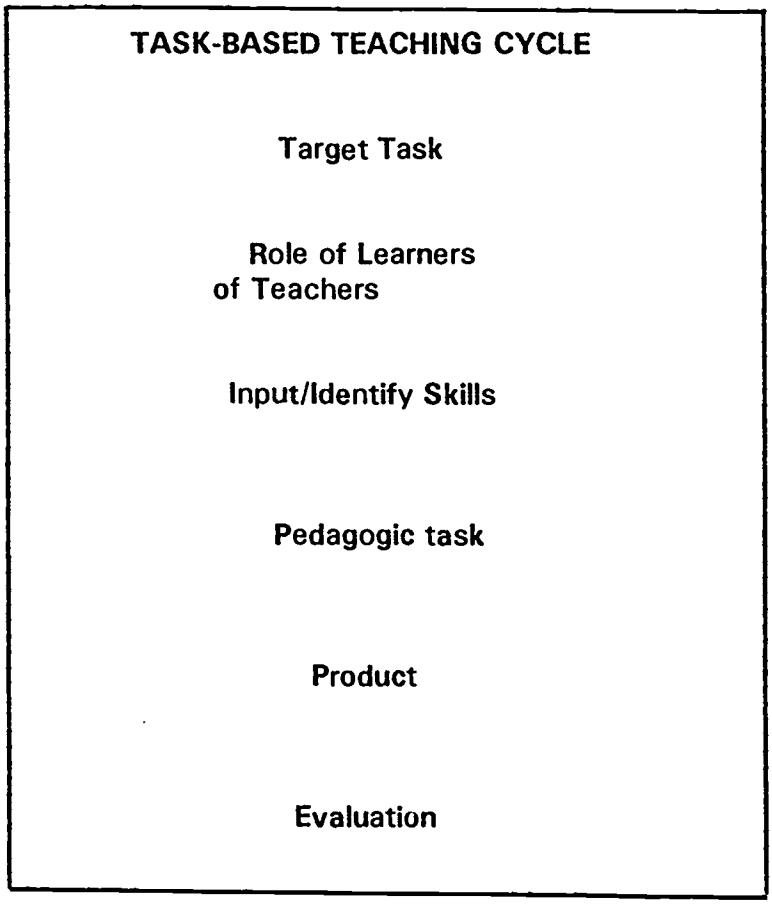
In a later study more directly concerned with the role of one-way and two-way information gap tasks, Pica and Doughty (1986), returned results which highlight the importance of each learner holding unique information. Task and learning arrangement components mark the study as a development of earlier work (1985a, 1985b). Firstly, all tasks had a description of information exchange, either optional in the teacher mode or required. Secondly, the major comparison of teacher-fronted versus groupwork was supplemented by a third pattern, the student dyad. The researchers showed a direct interest in dyads.
Greater modification of language occured in the "required information" tasks where unique information was held by each learner,whether it was teacher-fronted or part of groupwork. One notes that two-way tasks provide many opportunities for student

to student interaction. The dyadic two-way task could lead to students having to negotiate language and content in a meaningful way (Hall, 1992). What is of interest is the importance of the roles that are created by learning arrangements and the importance of information distribution in tasks.

Critical factors in classifying a range of effective tasks may be the type of task as determined by the discourse generated, the learning arrangement, the information distribution and the roles of learners that the task sets up. The practicalities of applying "task" as a unit for the practice and analysis of teaching are addressed in the following section.

Applying Task As A Unit of Teaching Analysis

Task may be practically applied as a unit of teaching analysis by relating the reasons for a classroom to the learners and their needs. The learners' thinking and the preoccupation that the drive for the answer creates can be incorporated into a framework of task as a unit of teaching analysis.



Target Task

The widely used ESP concept of target task recognises that learners' motivation can be both integrative and instrumental in that the learner may often be meeting needs and answering demands that stem from outside the classroom. The relevance of an EFL programme will often be seen by learners in terms of "Where", "When" "With Whom" and "How" English will be applied.

Target task choice will require analysis of communicative situations, purposes and functions of relevance to the majority of learners in a class.

Roles

Roles of the learners and teachers will determine much of the nature of learning. As has been suggested, different learning arrangements will stimulate different processes of language acquisition. The roles of the learners in pairwork are different from those in teacher-fronted teaching and the role of a teacher in leading intensive reading is different from that in group-based fluency work. How language work proceeds depends on the arrangement for performing the task so that roles or learning arrangements are important.

Input/Identify Skills

Input which is appropriate and motivating is critical as the materials need to pull together both target needs, learner interest and the final product. In choosing input one needs to identify skills that can function within the material. The material obviously needs to be appropriate, intellectually challenging to learners and reflective of meeting learners needs in terms of outside the classroom and to meet the challenge of the pedagogic task.

Pedagogic Task

Given that products or answers are important, much of the answering along the route to the product is the real learning. The process is mediated by learner motivation, the interest in the materials and the cognitive processes that are engaged in. The task can create depth of processing, be presented with clear procedures and echo the target tasks that learners face. Choosing a task may involve an analysis of the information arrangement and the thinking that can occur in different formats, as well as well known features of well chosen vocabulary and topics.

Product

The product or answer is an important concern. While there has been much focussing on the process of learning one can not deny the drive to reach an answer. A product or answer may be seen as valid if it is working towards an authentic form or is applicable in that it appropriates target task completion as well as a sense of

achieving the piece of classroom work. Comprehensible output and productive use of language are important considerations in teaching choices.

Evaluation

Evaluation by both learners and course providers can provide insight into the relationship between meeting learners needs through useful learning arrangements, motivating input, useful types of tasks and productive learning.

To summarise one can evaluate the classrooms relevance through the meeting needs and aligning target tasks with that which makes up a lesson unit. The lesson unit or pedagogic task will be motivating if students see its relevance. The relevance is not only in the "what" of learning, the input but also in the 'how" - the learning arrangement being a framework for processing language, ideas, skills and text. The processes of the task need to be aligned with the product, so that the answer, will reflect the amount of thinking and language generated by processes. Our evaluation as part of the cycle will ensure that the classroom is task based, learner oriented and productive in aiding the learning and acquisition of language. In structuring and organising the drive for answers we work with tasks, and hopefully choose and facilitate processes that are rewarding for learners in a changing world.

This paper is a presentation for the International Language in Education Conference, Hong Kong, December 16 1993.

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REFERENCES

Abercrombie, M.L.J. (1970). Aims and Techniques in Group Teaching. London: Society for Research into Higher Education.

Anderson, J.R. (1980). Cognitive Psychology and its Implications. San Francisco: W.H.Freeman.

Anderson, L. (1981). "Short-Term Student Responses to Classroom Instruction." Elementary School Journal 82, 97-108.

Anderson, L.M., Stevens, D.D., Prawat, R.S., and Nickerson, J. (1988). "Classroom Task Environment and Students Task-related Beliefs." Elementary School Journal 88, 3, 281-295.

Anderson, R.C., Spiro, R.J., and Montague, W.E. (1977). Schooling and the Acquistion of Knowledge. Hillsdale N.J: Lawrence Erlbaum Associates.

Aronson,E. et al (1975). "The Jigsaw Route to Learning and Liking." Psychology Today 8,9, 43-50.

Barnes, D. (1973). Language in the Classroom. Bletchey, England: Open University Press.

Bennett, N. (1988). "The Effective Primary School Teacher: The Search for a Theory of Pedagogy." Teaching and Teacher Education 4,1, 19-30.

Bennett, S.N. (1982). "Time to Teach: Teaching Learning Processes in Primary Schools." Aspects of Education 27, 51-70.

Berliner, D.C. (1987)."Knowledge is Power: A Talk to Teachers About a Revolution in the Teaching Profession." In D.C. Berliner and B.V. Rosenshine (Eds.) Talks to Teachers. New York: Random House.

Bloom, B.S. (1976). Human Characteristics and School Learning. New York: McGraw-Hall.

Blumenfield, P.C. and Meece, J.L. (1988). "Task Factors, Teacher Behaviour and Students Involvement and Use of Learning Strategies in Science." The Elementary School Journal 88,3, 235-250.

Blumenfield, P.C., Mergendoller, J.R., and Swarthout, D.W. (1987). "Task as a Heuristic for Understanding Student Learning and Motivation." Journal of Curriculum Studies 19,2, 135-148.

Breen. M.P. (1987). Learner contributions to task design. In C.N. Candlin & D. Murphy (Eds.) Lancaster Practical Papers in English Language Education: vol 7. Language Learning Tasks (pp. 23-46). Englewood Cliffs, NJ: Prentice Hall.

Brophy, J. and Good, T. (1986). "Teacher Behavior and Student Achievement." In M. Wittrock (Ed.) Handbook on Research on Teaching (pp 328-375). New York : MacMillian.

Brophy, J., Rohrkemper, M., Rashid, H., and Goldberger, M. (1983). "Relationships Between Teachers' Presentations of Classroom Tasks and Students' Engagement in Those Tasks." Journal of Educational Psychology 75, 544-552.

Brumfit, C.J. (1984). Communicative Methodology in Language Teaching. Cambridge: Cambridge University Press.

Brumfit, C.J. (1980). Problems and Principles in English Teaching. Oxford: Pergamon.

Burns, R.B. (1984). "How Time is Used in Elementary Schools : the Activity Structure of Classrooms."In L.W.Anderson (Ed.) Time and School Learning (pp 91-127). New York: St. Martins Press.

Byers, B.H. (1973). "Testing Proficiency in Interpersonal Communication." RELC Journal 4,2, 39-47.

Calfee, R. (1981). "Cognitive Psychology and Educational Practice". In D.C. Berliner (Ed.) Review of Research in Education (Vol.9). Washington D.C.: American Educational Research Association.

Candlin, C.N. (1987). Towards task-based language learning. In C.N. Candlin & D. Murphy (Eds.), Lancaster Practical Papers in English Language Education: Vol. 7. Language learning tasks (pp. 5-22). Englewood Cliffs, NJ: Prentice Hall.

Carroll, J.B. (1963). "A Model of School Learning." Teachers College Record 64 723-733.

Carroll, J.B. (1985). "The Model of School Learning: Progress of an Idea." In C.W. Fisher and D.C. Berliner (Eds.) Perspectives on Instructional Time (pp 29-58). New York: Longman.

Carter, K. and Doyle, W. (1982). Variations in Academic Tasks High and Average Ability Classes. Presented at the Annual Meeting of the American Education Research Association. New York: March 1982.

Chamot, A.V. and O'Malley, J.M. (1986). A Cognitive Academic Language Learning Approach : An ESL Content - Based Curriculum. Rosslyn, Va: National Clearinghouse for Bilingual Education.

Chaudron, C. (1988). Second Language Classrooms: Research on Teaching and Learning. Cambridge: Cambridge University Press.

Clark, C.M., and Yinger, R.J. (1979). "Teachers Thinking." In P.L.Peterson and H.J.Walberg(Eds.) Research on Teaching. Berkeley CA: McCutchan.

Croll, P. (1988). "Teaching Methods and Time on Task in Junior Classrooms." Educational Research 30, 2, 90-98.

Crookes, G. (1986). "Task Classification: A Cross Disciplinary Review." Technical Report No 4: Center for Second Language Classroom Research. Hawaii: University of Hawaii at Manoa.

Crookes, G and Rulon, K.A (1985). "Incorporation of Corrective Feedback in Native Speaker/Non-Native Speaker Conversation." Technical Report No 3: Center for Second Language Classroom Research. Manoa, Hawaii: Social Science Research Institute.

Cummins, J. (1984). Bilingualism and Special Education: Issues in Assessment and Pedagogy. San Diego: College Hill Press.

Dale, T.C. and Cuevas, G.J. (1987). "Integrating Language and Mathematics Learning" in J. Crandall (Ed.), ESL Through Content Area Instruction. pp 9-54. Prentice Hall Regents: New Jersey.

Denham, G. and Lieberman, A.(Eds.) (1980). Time To Learn. Washington: National Institute of Education.

Doughty, C. and Pica, T. (1986). "Information Gap Tasks: Do they Facilitate Second Language Acquisition?" TESOL Quarterly 20,2, 305-325.

Doyle, W. (1983). "Academic Work." Review of Educational Research 53,2 159-199.

Doyle, W. (1986). "Classroom Organisation and Management." In M. Wittrock (Ed.), Handbook of Research on Teaching (pp 392-431). New York: Macmillan.

Duff, P.A. (1986). "Another Look at Interlanguage Talk: Taking Task to Task." In R.R Day (Ed.). Talking to Learn: Conversation in Second Language Acquisition. (pp 147-181). Rowley, Ma: Newbury House.

Ellis, R. (1984). "Communication Strategies and the Evaluation of Communicative Performance." ELT Journal 38,1, 39-44.

Fielder F. E. (1967). A Theory of Leadership Effectiveness. New York: McGraw-Hill.

Forrester, J. (1968). Teaching Without Lecturing. Oxford: University Press.

Frymier, J. (1981). "Learning Takes More Than Time on Task." Educational Leadership, 38, 634-649.

Gaies, S.J. (1983). "The Investigation of Language Classroom Processes." TESOL Quarterly 17,2, 205-217.

Gass, S. and Varonis, E.M. (1985). "Task Variation and Non-native/Native Negotiation of Meaning." In S. Gass and C. Madden (Eds.). Input in Second Language Acquisition (pp 149-161). Rowley, Ma: Newbury House.

Gerleman, S.L. (1987). "An Observational Study of Small Group Instruction in Fourth Grade Mathematics Classrooms." Elementary School Journal 88,1, 3-28.

Gettinger, M. (1984). "Individual Differences in Time Needed for Learning: A Review of Literature." Educational Psychologist 19, 15-29.

Gettinger, M. (1989). "Effects of Maximising Time Spent and Minimizing Time Needed for Learning on Pupil Achievement." American Educational Research Journal 26,1, 73-91.

Graves, D.H. (1975). "An Examination of the Writing Processes of Seven Year Old Children." Research in the Teaching of English 9, 227-241.

Graves, D.H. (1983). Teachers and Children at Work. New Hampshire: Heinemann.

Hall, S.J. (1992). Using Split Information Tasks to Learn Mathematics Vocabulary. Guidelines. 14, 1, 72-78.

Harley B., Allen P., Cummins J. and Swain M. (Eds.0 (1990). The Development of Second Language Proficiency. Cambridge: Cambridge University Press.

Hyland K. and Hyland F. (1992). Go for Gold: Integrating Process and Product in ESP. English for Specific Purposes. 225-242.

Johnson, D.W. and Johnson, R.T. (1975). Learning Together and Alone. Englewood Cliffs, N.J: Prentice Hall.

Johnson, R.T., and Johnson, D.W. (1985). "Student-Student Interaction: Ignored but Powerful". Journal of Teacher Education 36,4, 22-26.

Jolly, D. and Early, P. (1974). Group Work in English Language Teaching. The British Council: Belgrade.

Littlejohn, A.P. (1983). "Increasing Learner Involvement in Course Management." TESOL Quarterly 17,4, 595-608.

Long, M.H., Adams, L., McLean, M., and Castanos, F., (1976). In J. Fanselow and R. Crymes (Eds.). On TESOL 76. Washington, DC: TESOL.

Long, M.H. (1975). "Group Work and Communicative Competence in the ESOL Classroom." In Burt, M. K. and Dulay, H. C. (Eds.) On TESOL 75: New Directions in Language Learning, Teaching, and Bilingual Education. Washington D.C.: TESOL. Cited in Long, M. (1980).

Long, M.H. (1980). "Inside the 'Black Box': Methodological Issues in Classroom Research on Language Learning." In H.W. Seliger and M.H. Long (Eds.). Classroom Oriented Research in Second Language Acquisition. Rowley, Mass: Newbury House.

Long, M.H. (1985). "A Role for Instruction in Second Language Acquisition: Task Based Language Teaching." In Hyltenstam, K. and Pienemann M.(Eds) Modelling and Assessing Second Language Acquisition (pp 77-99). San Diego: College-Hill Press.

Long, M.H. (1989). "Task, Group and Task Group Interactions." Plenary Address to RELC, Regional Seminar. April 1989, Singapore.

Long, M.H. and Porter, P.A. (1985). "Group Work, Interlanguage Talk and Second Language Acquisition." TESOL Quarterly 19,2,207-227.

Marx, R.W., and Walsh, J. (1988). "Learning from Academic Tasks." Elementary School Journal 88,3, 207-219.

Mergendollar, J.R., Marchman, U.A., Mitman, A.L., and Packer, M.J. (1988). "Task Demands and Accountability in Middle Grade Science Classes." The Elementary School Journal 88,3, 251-265.

Mohan, B.A. (1979). "Relating Language Teaching and Content Teaching." TESOL Quarterly 13,2, 171-182.

Mohan, B.A. (1986). Language and Content. Reading, Massachusetts: Addison Wesley.

Murphy J.M. (1991). Oral Communication in TESOL: Integrating Speaking, Listening and Pronunciation. TESOL Quarterly 25, 1, 51-75.

Nation, I.S.P. (1975). Language Teaching Techniques. Wellington: English Language Institute, Victoria University.

Nation, I.S.P. (1983). Teaching and Learning Vocabulary. Wellington: English Language Institute, Victoria University.

Nation, I.S.P. and Thomas, G.I. (1988). Communication Activities. Wellington: English Language Institute, Victoria University.

Nunan D. (1991). Communicative Tasks and the Language Curriculum. TESOL Quarterly 25,2, 279-295.

O'Rourke, A. and Philips, D. (1989). Responding Effectively to Pupils' Writing. Wellington: New Zealand Council For Educational Research.

Peterson, P.L., Marx, R.W., and Clark, C.M. (1978). "Teacher Planning, Teacher Behavior and Student Achievement." American Educational Research Journal 15, 417-432.

Pica, T. and Doughty, C. (1985a). "Input and Interaction in the Communicative Language Classroom: A Comparison of Teacher Fronted and Group Activities." In S.M. Gass and C.G. Madden (Eds.), Input in Second Language Acquisition (pp 115-132). Rowley: Newbury House.

Pica, T. and Doughty, C. (1985b). "The Role of Group Work in Classroom Second Language Acquisition." SSLA 7, 233-248.

Pica, T., Doughty C. and Young R. 1986. Making Input Comprehensible: Do Interactional Modifications Help? ITL Review of Applied Linguistics 72, 1-25.

Pienemann, M. & Johnston, M. (1987). Factors influencing the development of language proficiency. In D. Nunan (Ed.), Applying second language acquisition research (pp. 45-141). Adelaide, Australia: National Curriculum Resource Centre.

Prabhu, N.S. (1987). Second Language Pedagogy. Oxford: Oxford University Press.

Richards J.C. and Rodgers T.S. 1986. Approaches and Methods in Language Teaching. Cambridge: Cambridge University Press.

Richards J.C. (1990). The Language Taching Matrix. Cambridge: Cambridge University Press.

Schmuck, R.A. and Schmuck, P.A. (1971). Group Processes in the Classroom. Dubuque, Iowa: W. C. Brown.

Segal V. A. (1982). The Cyclical Nature of Decision Making. Small Group Behavior 13,3, 333-348.

Sharan, S. (1980). "Cooperative Learning in Small Groups." Review of Educational Research 241-271.

Shavelson, R.J., and Stern, P. (1981). "Research on Teachers Pedagogical Thoughts, Judgements and Behavior." Review of Educational Research 51,4, 455-498.

Shaw M. E. (1976). Small Group Dynamics: The Psychology of Amall Group Behavior. New York: McGraw-Hill.

Slavin, R. (1977). "A Student Team Approach to Teaching Adolescents with Special Emotional and Behavioral Needs." Psychology in the Schools 14, 77-84.

Slavin, R. (1978). "Effects of Student Teams and Peer Tutoring on Academic Achievement and Time on Task." Journal of Experimental Education 48, 252-257.

Slavin, R.E. (1980). "Cooperative Learning." Review of Educational Research 50,2, 315-342.

Smith, E. L. and Sendleback, J. (1979). Teacher Intentions for Science Instruction and Their Antecedents in Program Materials. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco.

Stahl, S.A. and Vancil S.J. (1986). "Discussion is What Makes Semantics Maps

Work in Vocabulary Instruction." The Reading Teacher 40,1, 62-67.

Swaffar, J.K., Arens, K. and Morgan, M. (1982). "Teacher Classroom Practices: Redefining Method as Task Hierarchy." Modern Language Journal 66,1, 24-33.

Tikunoff, W.J. (1985). Developing Student Functional Proficiency: A Teachers Casebook. Gainesville, Florida: University of Florida.

Tong-Fredericks, C. (1984). "Types of Oral Communication Activities and the Language They Generate: A Comparison." System 12,2, 133-146.

Ushimaru A. (1992). EFL Learners Talking to Each Other: Task Types and the Quality of Output. JALT Journal 14, 1.

Uttero, D.A. (1988). "Activating Comprehension Through Cooperative Learning." The Reading Teacher 42,5, 390-395.

Van Lier, L. (1988). The Classroom and the Language Learner. New York: Longman.

Wang, M.C. (1987). "Individual Differences and Effective Schooling." Professional School Psychology 2, 53-66.

White, L. (1987). Against comprehensible input: The input hypothesis and the development of L2 competence. Applied Linguistics, 8(1), 95-110.

Young R. (1988). Variation and the interlanguage hypothesis. Studies in Second Language Acquisition, 10(3), 281-302.

Zahorik, J.A. (1975). "Teachers' Planning Models." Educational Leadership 33, 134-139.

Zobl, H. (1985). Grammars in search of input and intake. In S. M. Gass & C. G. Madden (Eds.), Input in second language acquisition (pp. 329-344). Rowley, M.A.: Newbury House.