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ABSTRACT

A review of the literature on the transfer of preservice teacher training to the classroom suggests that several definitive factors enhance transfer. A social studies methods course was developed with these factors in mind, and included directed reading activities (DRA) with a text, controversial topic discussion, and inquiry. During the academic year 1983-1984, thirty-two student teachers chose one strategy for observation. This study was designed to determine the extent to which the training for those three teacher competencies transferred from the methods class to student teaching. The DRA group (n=9, mean grade point average GPA for methods class 2.75 out of a possible 4.0) received the lowest score, 1.4 out of a possible 4.0. The controversial topic discussion group (n=17, mean GPA 3.09) showed strong discussion features overall, receiving a score of 3.0. The inquiry group (n=6, mean GPA 3.11) performed at a superior level and received a 3.6. DRA lessons require more planning than the others, and this may account for the poor showing there. It is recommended that student teachers be placed with cooperating teachers who have either graduated from the same training institution or are informed as to the major steps of foundational strategies taught in the students teacher's methods courses, thus helping to insure transfer of training. Transfer of training would more likely be promoted if a limited number of foundational strategies were taught in greater depth and subsequently practiced by preservice teachers to the point of overlearning. (PPB)

TRANSFER OF TRAINING: FROM THE SOCIAL STUDIES METHODS COURSE TO STUDENT TEACHING

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Methods courses in teacher education are taught with the expectation that content, skills, and appreciations learned on campus will transfer to student teaching and ultimately to a teacher's repertoire in a full-time teaching position.

The research literature suggests that various factors are involved in transfer of training. Judd (1908) and Thorndike (1913) indicated that transfer of training takes place to the extent that identical elements occur in both training and criterial situations. Hull (1920) reported that transferability also depends upon the application of a principle during original learning to as many specific contexts as possible. The contributions of Morrisett and Hoveland (1959) stressed overlearning. Overlearning requires a sufficient number of adequately-spaced repetitions and reviews and differential practice of the more difficult components of a task. Moreover, frequent testing and feedback promote consolidation by

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confirming clarifying, and correcting previous learnings.

In addition to favorable teaching and learning conditions, a pupil's personality also affects transfer of training. Ausubel (1968) suggested that personality-related attitudes toward novel tasks such as willingness to improvise, venturesomeness, self-confidence, level of aspiration, and rigidity have a bearing on transfer of training as well as attitudes toward cer ain subjects, skills, and learning tasks. A thorough review of the above theories can be found in Shulman and Tamir (1973).

When transfer of training is considered vis a vis teacher preparation programs, other studies are pertinent. First, does teacher training transfer to classroom settings? The findings appear negative although some elements of training seem to transfer to the classroom. While Hoste (1972), Clark, Smith, Newby, and Cook (n.d.), and Pigge (1978) found that teachers reported that few of their teaching ideas came from education courses, Zahorick (1977) revealed that teacher preparation programs contributed significantly to verbal teaching behavior in the areas of questioning strategies, praise, lecturing, clarifying, giving directions, and answering questions.

Second, which techniques of the methods course seem to engender transfer? Simulation appears to enhance transfer of training according to Hull (1983) and Martin (1981) whose training entailed models of inquiry and role-playing and Laktasic (1978) who stressed peer teaching and role-playing.

Scholarly reviews of the educational research literature offer additional guidance for educators involved in teacher education. For instance, Haberman (1969) identified intelligence as a major determinant in the transfer process. If current admission standards were raised for pre-service teachers, undoubtedly transfer of training would be enhanced. Ripple and Drinkwater (1982), Fullen and Pomfret (1977) and Ellis (1965) concluded that changes for transfer of training increased when training tasks are similar to tasks needed in the classroom, a variety of training activities is employed, skills are overlearned, and many opportunities exist for practice. Peck and Tucker (1973) labeled such training as a systems approach in which pre-service teachers were directly involved in the role to be learned or close approximations such as classroom simulation laboratories. These activities produced the desired teaching behaviors more effectively than abstract experiences such as lectures. Peck and Tucker (1973) listed the following steps in a system's approach: behavioral objectives; planned training; measuring results of training; feedback to the learner; trial teaching experience; and measurements after the teaching experience.

To combat the early discarding of new behaviors found by Fullen (1983), Joyce and Showers' (1981) review of the literature indicated that a training system entailing theory, demonstration, practice, and feedback would support the acquisition of skills but not necessarily transfer these same

skills to the teaching behaviors of teachers. Flanders (1963), Sharan and Hertz-Lawarowitz (1982), and Showers (1983) demonstrated that transfer of training improves when coaching of teaching, i.e., companionship, providing technical feedback, and analysis of application, occurs in teachers' classrooms.

This review of literature suggests that definitive factors enhance transfer of training. If social studies methods courses were characterized by most of these factors, transfer of training ought to occur and behaviors should be observable.

THE STUDY

With attention to the elements of transfer of training described above, the author designed a social studies methods course characterized by behavioral objectives, foundational teaching competencies, and teacher demonstration and student practice of these competencies in peer teaching and simulation activities such as prototypes, protocols, and role playing, in which elementary school social studies textbooks and content were employed. These pre-service teachers demonstrated their proficiency in these competencies by taking three paper and pencil tests.

Selected for this investigation from the methods course were three exemplars which received considerable emphasis and practice in the campus classroom: directed reading activity using a social studies textbook, discussion of a controversial topic, and inquiry. Each student teacher selected one strategy for observation; thus these groups were formed.

The problem of the study was to determine the extent to which these three selected teacher competencies transferred from the campus methods class to student teaching. It was hypothesized that a social studies methods course taught according to elements that enhanced transfer of training would produce student teacher observable data that supported transfer of training. For the three lessons, the arbitrary rating selected for all student teachers for all items of the strategy necessary to sustain the hypotheses for the three lessons was set at a rating of 2.5 out of a possible 4.0 rating: 2.5 is 50 percent more than pure chance (50/50).

The Subjects. During the Academic Year 1983-84 thirty-two preservice teachers were identified as having successfully completed the author's course "Teaching Social Studies in the Elementary School" in the previous year and a half. Final course grades for the social studies course were nearly equivalent for the three groups. (see Table 1). They were assigned to middle class elementary schools in two Maryland counties which had teacher education centers with a full-time coordinator. Table 1 indicates that about a year had elapsed for all groups since completing the social studies course and being observed in the research project. The range of the three groups' mean final grade point
average was 2.75 to 3.11 or nearly equivalent, although the standard deviation indicated more diversity among members of the

"directed reading activity" group than among members of the other groups.

The Procedures. Near the end of their student teaching assignment, the student teachers were asked to choose and prepare one of the three aforementioned social studies lessons for observation by the researcher. No coaching by the cooperating teacher nor other professional person was permitted. The rationale for having student teachers select one of three strategies for observation was based on the belief that student teachers ought to have the freedom to choose a strategy that they could teach with confidence and be observed at their best teaching posture; even with this selection student teachers could not go beyond their training and experience.

Table 2 indicates the distribution of the student teachers according to grade levels. Since various topics were employed by the student teachers in the same three strategies in various grade levels, reliability of the findings was strengthened. Nevertheless, this study is properly called action research rather than an experimental study.

(TABLE 1 goes about here)

(TABLE 2 goes about here)

Reliability of observations was enhanced by the observer keeping a time log of each observation and using this log to determine ratings of items. Moreover, the observer has over twenty years of collecting activity and verbal data

through classroom observations using OSCAR (Medley and Mitzel, 1958) and Interaction Analysis (Amidon and Flanders, 1963), and is considered an expert.

Content validity of items for each of the three strategies in the study was obtained by referring to instructor lecture notes when constructing the component parts of each strategy. These items were submitted to two other experts in elementary social studies teacher education, and 94% agreement on all items was obtained.

Ratings of lessons ranged from 0 (not observed) to 4 (highest rating). A rating of one was considered unsatisfactory performance. "Pacing of lesson" and "management of pupils" were also rated to obtain a more complete evaluation of teaching. The average time per lesson was 31 minutes for the directed reading lesson, 37 minutes for discussion of a controversial/current event, and 31 minutes for the inquiry lesson. Nearly all student teachers taught the entire class but five student teachers taught only a partial class; for all lessons an average of twenty children participated.

Extant Knowledge Before Training.

To ascertain if pre-service teachers without training in the social studies methods course would know (and therefore, presumably, use) what good practices were, twenty- eight pre-service teachers were asked to list the components of the three different lessons of the study as well as other components of discussion, pacing of lesson, climate (verbal

behavior), and management of pupils. Correct responses (those containing specific methods taught in the course) were summed for each sub-category and compared with the sum of satisfactory performance by student teachers in their lessons. These resulted in 2 x 2 tables with two groups forming the columns and presence or absence of the sub-category forming the rows.

The chi-square test of equality of two proportions, with Yates' correction, was applied to each of the 2 x 2 tables of frequencies. Caution should be used in interpreting the results since the expected frequencies in many cases fall below ten. With one degree of freedom, the critical value of the chi-square statistic at the .05 significance level is 3.84. Tables for which the chi-square reaches or exceeds 3.84 show significantly different proportions between the two groups at the .05 level.

Since many (41) different tests were run, a more conservative approach may be found using the Bonferroni procedure (Dayton and Schafer, 1973). With a familywise Type I error rate of .05, the chi-square critical value for each individual test is 10.42. Tables for which the chi-square reaches or exceeds 10.42 show significantly different proportions between the groups with a familywise Type I error rate of .05. Table 3 gives tests of significance, and inspection reveals that the conservative Bonferroni procedure favored the student teachers twenty-one out of forty-one tests.

(TABLE 3 goes about here)

The assumption is made that the untrained students were similar to the trained students and that they would include successfull, the elements they listed if they were asked at that time to prepare and teach a lesson as the trained students were.

THE FINDINGS

Directed Reading Activity using a Social Studies Textbook (N-9). The average for nine student teachers for all items of the reading method was 1.4; therefore the hypothesis was rejected. Because of complexity of the numerous sub-categories, this lesson was probably the most difficult of the three lessons. Generally student teachers were rated either near the top or the bottom on all categories. (See Table 4).

(TABLE 4 goes about here)

Ratings of readiness activities that prepare children for reading several pages of the textbook were generally mixed with nearly half or more of the student teachers omitting readiness activities. Especially missing was the teaching of significant vocabulary words the children would encounter in their reading; moreover, principles of concept learning, e.g., pointing out critical attributes and using positive examples, failed to be employed.

Setting purposes for reading the textbook was non-existent for nearly half of the student teachers; when used, student teachers failed to write purposes on the blackboard for pupil

referral during their reading, and did not invite children's questions for motivational purposes.

During the student teacher supervision of the silent reading, five out of nine failed to supervise, ard nearly all responded poorly to children's requests for help or in observing symptoms of reading difficulty.

During the follow-up of the silent reading, most student teachers ergaged in comprehension activities and asked higher level questions. Special instruction for the weak readers, creative activities, and enrichment were absent by nearly all student teachers but this was probably a result of a lack of time. Management of pupils was generally strong as was the pacing of the lesson.

Of the three lessons, the directed reading lesson was taught the poorest. Except for one student teacher, the lesson was inadequately taught.

Discussion of a Controversial Issue/Current Event (N-17). The average for seventeen student teachers for all items of the strategy was 3.0; therefore the hypothesis was sustained. Nearly all of the student teachers performed satisfactorily on most of the criteria for the "issue" and the accompanying discussion (See Table 5).

Fifteen of seventeen student teachers began the lesson by defining the problem satisfactorily. Weaknesses were noted in defining terms, distinguishing between facts and opinion, and

employing some type of audio-visual aid to clarify the issue. Nevertheless overall performance was strong.

The only exception to strong discussion features for all student teachers was that ratings for high level questions were on the downside for eight student teachers.

(TABLE 5 goes about here)

Flanders Interaction Analysis Indirect/Direct ratios were computed to determine whether discussions were managed by the teacher directly (autocratically) or indirectly (democratically).

$$\text{ID ratio} = \frac{\text{Tallies for indirect talk}}{\text{Tallies for direct talk}}$$

These ratios determine the ratio of direct teacher talk (lectures, directs, criticizes) to teacher indirect talk (accepts feelings/ideas, praises, asks questions). A ratio of .50 indicates a teacher uses twice as much direct talk as indirect talk; a ratio of 1.00 indicates as much direct talk as indirect talk, and a 2.00 ratio reveals twice as much indirect talk as direct talk. Four student teachers had ratios betwee .37 and .70; seven between 1.00 and 1.40; two were between 1.70 and 1.90; and four nad ratios between 3.00 and 5.00. A ratio of 1.00 was the mode obtained by five student teachers. Thus, 13 of 17 student teachers conducted the discussion in a democratic posture.

Pacing of lessons and management of pupils were uniformly strong for all student teachers for this lesson.

Inquiry (N-6). The average for six student teachers for all items of the inquiry method was 3.6; therefore the hypothesis was sustained. Solid inquiry lessons at the superior level characterized these student teachers as well as strong performance in discussion categories, climate of classroom, effective use of small groups, pacing of lessons, and management of children (See Table 6). The students who used inquiry lessons also showed the clearest overall difference from the untrained teachers using the chi-square comparisons (See Table 3).

(TABLE 6 goes about here)

DISCUSSION

The strategy of "directed reading activity" (DRA) received a total mean score of 1.4, the strategy "discussion of a controversial issue" obtained 3.0, and 3.6 was the total mean score of the "inquiry" strategy. Among nearly equivalent groups, what variables accounted for the wide range of performance? It is acknowledged that although each of the strategies has approximately the same number of component parts, the parts of the DRA require much planning by the teacher. Nearly half or more of the nine teachers using the DRA omitted critical emphases such as developing readiness, setting purposes for reading, supervising the silent reading, and follow-up of the reading.

Since the DRA was strongly emphasized in the college methods course as much or more than the other strategies, other reasons

must account for its poor showing. It is very possible that teachers of social studies see reading as divorced from social studies, and their neglect of sound reading procedures are emulated by student teachers. Probably the strong overall transfer of training in the sophisticated elements of the inquiry strategy is attributable to the lack of knowledge and practice by classroom teachers of the inquiry strategy, thus reducing significantly their influence of student teachers performing this type of lesson. Thus student teachers probably consulted their college methods notes in social studies which was verified in a post-research investigation (Herman, 1985).

Often college supervisors have reported that the teaching model provided by the cooperating classroom teacher takes precedence over the model that is taught, practiced, and evaluated in the social studies methods class on campus. When the competing model is absent, transfer of initial learning is probably more likely to occur.

RECOMMENDATIONS

According to officials of accrediting agencies, this sort of study is highly desirable by colleges of education in an evaluation of their products, but rarely conducted. To be sure, such observational studies consume a great amount of time for the researcher not only in the classroom but in travel time. Such product evaluation ought to be continued in social studies education and expanded to other curricular areas as well to determine effectiveness of instruction not only in

student teaching but in longitudinal studies of graduates who obtain full-time teaching positions.

The results of this study indicate mixed findings on transfer of training from the methods classroom on campus to the teaching environment of student teachers. To enhance transfer of training, it is recommended that student teachers be placed with cooperating teachers who have either graduated from the same teacher training institution as the student teachers and therefore have similar emphases in their training. Also, where this condition is absent, cooperating teachers ought to be informed before acquiring student teachers of the major steps of foundational strategies as taught in methods courses. Any means of clarifying instructional strategies used in preservice education methods courses to cooperating teacher would undoubtedly engender collegial support and transfer of training for student teachers.

Close supervision of student teachers by both cooperating teacher and college supervisor would also support transfer of training. In too many cases the neophyte is given long distance support and assistance, and often left on his/her own to learn from trial and error.

One of the chief barriers to transfer is the fact that elementary preservice teachers, unlike secondary school preservice teachers, are generalists and are trained in the methods of reading, language arts, mathematics, social studies, and science by up to five different instructors who often do not supervise their

students in student teaching, or do not even have responsibilities for student teacher supervision at all.

Such a condition militates against reinforcement of training. Innovations in college supervision of student teachers are desperately needed to insure that college instructors of specific methods classes supervise the same student teachers they trained. Moreover, if all instructors of different sections of the social studies methods course could agree on the important steps in foundational strategies and teach preservice teachers with some degree of uniformity, cross-supervising of student teachers could occur. Teaching uniformity of different sections of methods courses is as imperative in the professional preparation of teachers as it is in any professional/preparation program.

It is thought that a methods course attempts too much. Transfer of training would probably be promoted if only a limited number of foundational strategies were taught in depth, and subsequently practiced by pre-service teachers to the point of overlearning. Accompanying these practice sessions would be special instructor assistance with difficult steps of a strategy.

Since there is adequate research literature supporting simulation in training, more use of and refinement of simulation procedures are needed. Included is peer teaching in the campus classroom as well as the employment of prototypes, modules, protocols, and microteaching.

Somewhere down the line, transfer of training of teachers must be associated with student achievement. While the variables are numerous and complex in such an undertaking, the ultimate payoff is high transfer of training in teacher education programs that positively interface with pupil achievement in the designated skills and content areas.

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TABLE 1

STUDENT TEACHER PERSONAL DATA AS TO STRATEGY

	Directed Reading Activity (N=9)	Discussion of Issue (N=17)	Inquiry (N=6)
Final grade-Social Studies Course			
A	5	7	3
B	3	8	3
C	1	2	0
Mean months elasped since completing course and being observed as student teacher	9	12	11
Mean final grade point average (gpa)	2.75	3.09	3.11
Standard deviation for gpa	1.01	.30	.59

TABLE 2

DISTRIBUTION OF STUDENT TEACHERS TO GRADE LEVELS ACCORDING TO OBSERVED LESSON

	Directed Reading Activity	Discussion of Controversial Issue/Current Event	Inquiry
Grade 1	1	0	1
Grade 2	2	3	2
Grade 3	1	3	0
Grade 4	2	5	2
Grade 5	3	5	1
Grade 6	0	1	0
Total	9	17	6

TABLE 3

UNTRAINED TEACHERS' KNOWLEDGE OF LESSON COMPONENTS VERSUS TRAINED TEACHERS' PRACTICE OF THESE COMPONENTS: CRITICAL VALUES

DIRECTED READING LESSON USING A SOCIAL STUDIES TEXTBOOK STRATEGY	
Readiness	
Motivates	13.547*
Taps background	7.490**
Teaches concepts	2.092
Sets purposes	1.153
Supervises Silent Reading	.079
Follow-up	
Goes over purpose questions	13.547*
Critical thinking	22.028*
Comprehension activities	10.607
Instruction for weak readers	.000
Enrichment	2.950
Creative activities	1.170
INQUIRY STRATEGY	
Teacher states problem	15.911*
Pupils state hypotheses	21.116*
Teacher accepts all H_0	13.601*
Pupils gather data	4.905**
Pupils make applications	21.116*
Audio-visuals used by teacher	11.712*
DISCUSSION OF A CONTROVERSIAL ISSUE OR CURRENT EVENT STRATEGY	
Defines problem	15.490*
Defines terms	5.869**
Distinguishes between fact/opinion	6.526**
Marshalls facts	9.360**
Attempts to reach conclusion	10.698*
Topic relevant to pupils	.000
Topic treated adequately	33.195*
Teacher gives own ideas at end	11.978*
Audio-visuals used	.000
DISCUSSION (Controversial issue and Inquiry Strategies)	
No monopolization	.000
Disagreements tactful	22.022*
Balance of pro/con	.108
Gatekeeper role of teacher	32.805*
Keeps on topic	33.877*
Seeks wide participation	1.836
Teacher open to pupil ideas	19.154*
Pupil curiosity	19.823*
Teacher asks high level questions	6.660**
Child-centered	23.930*
PACING OF LESSON (all strategies)	7.857**
MANAGEMENT OF PUPILS (all strategies)	
Clear directions	26.640*
Structures lesson	45.086*
Keeps pupils on task	.000
Corrects significant misbehavior	26.406*

* .05 level favoring student teachers: Bonferroni procedure

** .05 level favoring student teachers: usual chi-square

TABLE 4

Lesson: DIRECTED READING LESSON USING A SOCIAL STUDIES TEXTBOOK

	RATING of Student Teachers (N=9)						
	Low 0	1	2	3	High 4	$\bar{X}$	% doing it satisfactorily
	Unsatisfactory			Satisfactory			
READINESS							
Motivates - 3D	4	1			4	1.9	44
Taps background of information	4	1		3	1	1.6	44
Teaches concepts							
Significant words	5				4	1.8	44
Word recognition/comprehension	4	1	1	2	1	1.4	44
Uses principles of concept learning	6		3			.7	33
Puts words on board	4				5	2.2	56
SETS PURPOSES FOR READING	4	1			4	1.9	44
Questions parallel text	5				4	1.8	44
Places words on board	8				1	.4	11
Solicits children's questions	8				1	.4	11
SUPERVISES SILENT READING	5				4	1.8	44
Responds properly to student's requests	7		1	1		.6	22
Notices symptoms of reading difficulty	8			1		.3	11
FOLLOW-UP							
Goes over purpose questions	4	1		1	3	1.8	44
Critical thinking	2	1		2	4	2.6	66
Comprehension activities	2			1	6	3.0	77
Instruction for disabled	9					.0	0
Enrichment	7				2	.9	22
Creative activities	6	1			2	1.0	22
TOPIC RELEVANT			1	2	6	3.6	100
PACING OF LESSON		2	1	5	1	2.6	77
MANAGEMENT OF PUPILS							
Clear directions		1		2	6	3.4	89
Structures lesson			1	3	5	3.4	100
Keeps pupils on task				1	8	4.0	100
Corrects significant misbehavior				1	8	4.0	100

TABLE 5

Lesson: DISCUSSION OF CONTROVERSIAL ISSUE/CURRENT EVENT

RATING OF Student Teachers (N=17)

	Low 0	1	2	3	High 4	$\bar{X}$	% doing it satisfactorily
ISSUE	Unsatisfactory			Satisfactory			
Defines problem	1	1	2	6	7	3.2	94
Defines terms		7	4	3	3	2.1	55
Distinguishes between fact / opinion		5	7	3	2	2.1	68
Marshalls facts			4	7	6	3.1	100
Attempts to reach conclusion		3	7	3	4	2.5	81
Topic relevant to pupils (p)				5	12	3.7	100
Topic treated adequately			2	8	7	3.3	100
Teacher (t) gives own ideas at end			6	6	5	3.0	100
Audio-visual used	13		1	1	2	.8	30
DISCUSSION							
No pupil monopolization				4	13	3.7	100
Disagreements tactful			1	9	7	3.3	100
Balance of pro/con			11	3	3	2.4	100
Gatekeeper role of t.			1	7	9	3.5	100
Keeps on topic					17	4.0	100
Seeks wide participation				2	15	3.9	100
T. open to p. ideas			2	6	9	3.4	100
P. curiosity			2	4	11	3.5	100
T. asks high level questions	1	4	3	6	3	2.4	74
P. centered			2	1	14	3.7	100
CLIMATE OF CLASSROOM			3	9	5	3.1	100
PACING OF LESSON			1	11	5	3.3	100
MANAGEMENT OF PUPILS							
Clear directions			1		16	3.9	100
Structures lesson				4	13	3.7	100
Keeps p. on task				1	16	3.9	100
Corrects significant misbehaviors				1	16	3.9	100

TABLE 6

Lesson: Inquiry

	RATING of Student Teachers (N=6)					
	Low 0	1	2	3	High 4	$\bar{X}$	% doing it satisfactorily
	Unsatisfactory			Satisfactory			
INQUIRY							
Teacher (t) states problem				1	5	3.8	100
Pupil (p) states hypotheses			1	1	4	3.5	100
T. accepts all hypotheses					6	4.0	100
P. gather facts		1	1		4	3.2	83
P. makes conclusions			1		5	3.7	100
P. makes applications		1		1	4	3.3	83
Topic relevant to p.				2	4	3.7	100
Audio-visual used by t.				1	5	3.8	100
DISCUSSION							
No monopolization					6	4.0	100
Disagreements tactful			1		5	3.7	100
Balance of pro/con			1	2	3	3.3	100
Gatekeeper role of t.			1		5	3.7	100
Keeps on topic					6	4.0	100
T. seeks wide participation			1		5	3.7	100
T. open to p. ideas			1		5	3.7	100
P. curiosity				1	5	3.8	100
T. asks high level questions		1	1	2	2	2.8	83
Child Centerd			1		5	3.7	100
CLIMATE OF CLASSROOM				1	5	3.8	100
SMALL GROUPS USED EFFECTIVELY		1			5	3.7	83
PACING OF LESSONS		1	1	4	3.5		100
MANAGEMENT OF P.							
Clear directions			1		5	3.7	100
Structures lesson			1		5	3.7	100
Keeps pupils on task					6	4.0	100
Corrects significant misbehaviors					6	4.0	100