

Researching Numeracy Teaching Approaches in Primary Schools

TEACHER INTENTIONS SURVEY

Description

During Phase 2 of the project, the research team developed, trialled and refined an instrument to sample teacher intentions in relation to actual practice and to trace the language that teachers used to describe the nature of their interactions and involvement with students throughout the course of a lesson. The *Teacher Intentions Survey* seeks information about teacher intentions for the content and form of interaction and the links between these and their actions in three phases of their lessons, described in the *Early Years Numeracy Strategy* (DEET, 2001) as the *whole class activity*, the *small group*, and the *whole class sharing time*. In the survey the terms *beginning*, *middle* and *end* were used to refer to different phases in the lesson.

The *Teacher Intentions Survey* was designed by the research team to seek the maximum amount of data in the minimum time for teachers, and so a system of ticks and boxes was used. For example, the teachers were asked in one item to indicate the (single) statement that best characterised what they would be doing in the *beginning* phase of the lesson. They were asked to choose from:

Instructing the students what to do	Listening to students' suggestions
Showing students how to do something	Facilitating student to student interactions
Making links and connections	Posing a problem
Reviewing previous work	Finding out what students know
Answering questions	Other

There were parallel columns headed “planned interactions” and “actual interactions”, with the tense of the prompts reflecting the column. Obviously virtually all lessons are a combination of many of these characteristics, but the team was seeking to gather data over a number of lessons and so we emphasized to respondents that we wanted an indication of the main focus of their work. Draft versions were piloted with five teachers, with a researcher observing them while they completed the survey before an observed lesson and then subsequent to it. The revised survey was then sent to a variety of professionals, including the project team, for further refinement.

All teachers in the project received substantial professional development, including sessions on the nature of mathematics teaching and approaches to communication, as well as on the purpose and mechanics of the *Teacher Intentions Survey* itself. They were invited to complete the *intentions* part of the survey at the same time as they did their detailed individual planning for the lesson, and to complete the *actual part* as soon as practical at the conclusion of the lesson. They were also asked to attach their own record of the planning for the lesson and any relevant worksheets.

It should be noted that detailed case studies of selected teachers were also conducted to elaborate on these global data (see below), and it was only ever intended that the summaries of the survey data would provide a broadly based snapshot of the structure of mathematics lessons.

Up to six *Teacher Intentions Surveys* were completed by research school teachers between March and August in 2002 including some that were collected from a sequence of lessons as shown below.

TIS 1	March 12-19, 2002	Single lesson
TIS 2 & 3	April 22 to May 7, 2002	Two individual lessons
TIS 4, 5 & 6	July 22 to August 6, 2002	Three sequential lessons

Analysis

Teacher responses to the completed *Teacher Intentions Surveys* were coded and entered into a database. Data entry was double checked for accuracy and completeness and descriptive statistics were used to provide frequency counts and proportions of teachers opting for various choices at each point in the survey. These were summed over three to six lessons to give an overall picture of teachers' planning intentions and actions.

Explaining the Teacher Intentions Survey Data

First it should be noted that the data set represents an extremely detailed description of teacher planning and reports on their teaching, and the complete report of the data would take many pages. In order to simplify the results for this first level of analysis, the frequencies of the various tables for each survey were compared. The results were examined for trends over the respective surveys and key issues identified.

The analysis was done in two stages. The first three surveys were analysed together and the latter three were analysed subsequently. The data reported are predominantly from the first three surveys and the only reports on the latter surveys are to note trends.

To illustrate the way that the data extracts in the reports were determined, the following table presents the frequencies (in terms of valid percentages) of the responses of the teachers to the first three surveys. To clarify the analysis one of the easiest items to summarise was chosen. As can be seen from the Technical Report most items were much more difficult to summarise. The percentages are rounded to simplify the presentation as accuracy greater than whole percentages is not meaningful.

Frequencies (%) of responses to the items on the teaching approaches selected by the teachers in the beginning phase of the lesson are listed in the table below.

Teaching Approaches	TIS1	TIS2	TIS3
Modelling	20	26	24
Focussing	25	17	17
Noticing	6	5	11
Guiding	14	17	15
Funnelling	3	2	5
Excavating	10	10	7
Sharing	19	18	17
Convince me	1	1	3
Multiple boxes	1	0	1
Exercising Brain	1	2	0
15	1	1	1
17	1	1	0

The main body of the report contains the following text that was extracted from these data:

The teaching approaches were described as *modelling* by 23%, *focusing* by 20%, *sharing* by 18%, *guiding* by 16%, and *excavating* by 9%, from among a range of choices.

These figures were an overall synthesis of the data in the table, and intended to report the most frequent selections and any trends that were evident. In this case, it was taken that the distribution of the responses over the three surveys were similar. No trends were noted.

Note the two uncoded descriptions (15 and 17). These were from categories named ‘other’ which required ‘write-in answers’ and were not included in the quantitative data set. Since the numbers are very small, they do not form part of, or influence, the reporting of the data.

It is important to note that no particular inferences should be drawn from individual frequencies, and indeed in some cases the data are rounded even further. The power of these data are in the trends and comparisons between different aspects such as between what the teachers would be doing and what the students would be doing, and between the intended and actual actions.

Contents

- Teacher Intentions Survey Instrument
- Teacher Intentions Survey Technical Report

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TEACHER INTENTIONS SURVEY

The purpose of this survey is to:



1. Collect information on how you plan the interactions you intend to have with your students at different stages within the lesson
2. Reflect on your interactions and record how these match your intentions

Name	Year level
School	Date



SECTION 1: CONTEXT OF THE LESSON

Total time allocated for the lesson				Day of the week	
Part of the day (eg; first session after recess):					
Which strand is the main content of your intended lesson?			What structure will the lesson take?		
	Number		Measurement		Whole/Small/Whole
					Whole/Roving
	Space		Chance and Data		Small Groups only
					Other (specify)
What is the <u>major mathematical content focus</u> of your intended lesson (eg, array concept for multiplication, need for standard units in measurement etc.)?				Estimate the time breakdown of the lesson structure you are using	
				If a <u>teaching group</u> is to be used indicate the basis of group selection	
				Mixed ability	
				Near ability	
				Like needs (specify):	
				Other (specify):	
<u>Attachments:</u>					
<u>Please attach:</u> examples of materials used in this lesson, such as, a copy of the worksheet, description of the activity, details of the investigation or game, list of concrete materials etc... Specify the source of all resources that is, give book titles, authors, web addresses etc.					
<u>PNRP USE ONLY:</u>					

SECTION 2: BEGINNING OF THE LESSON

PLANNED INTERACTION	ACTUAL INTERACTION	
Briefly describe how your lesson will start.	Briefly describe what happened at the beginning of your lesson	
Approximate time:	Actual time:	
Circle the mark that best represents the relative involvement	Circle the mark that best represents the relative involvement	
		
Planned interaction Choose ONE statement that best characterizes what YOU will be doing	Actual interaction Choose ONE statement that best characterizes what YOU did.	
<input type="checkbox"/> Instructing students what to do	<input type="checkbox"/> Instructed students what to do	
<input type="checkbox"/> Showing students how to do something	<input type="checkbox"/> Showed students how to do something	
<input type="checkbox"/> Making links and connections	<input type="checkbox"/> Made links and connections	
<input type="checkbox"/> Reviewing previous work	<input type="checkbox"/> Reviewed previous work	
<input type="checkbox"/> Answering questions	<input type="checkbox"/> Answered questions	
<input type="checkbox"/> Listening to students' suggestions	<input type="checkbox"/> Listened to students' suggestions	
<input type="checkbox"/> Facilitating student to student interactions	<input type="checkbox"/> Facilitated student to student interactions	
<input type="checkbox"/> Posing a problem	<input type="checkbox"/> Posed a problem	
<input type="checkbox"/> Finding out what students know	<input type="checkbox"/> Found out what students knew	
<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	
Planned interaction Choose ONE statement that best characterizes what the STUDENTS will be doing	Actual interaction Choose ONE statement that best characterizes what the STUDENTS did.	
<input type="checkbox"/> Listening to instructions	<input type="checkbox"/> Listened to instructions	
<input type="checkbox"/> Listening to explanations	<input type="checkbox"/> Listened to explanations	
<input type="checkbox"/> Suggesting directions for investigation	<input type="checkbox"/> Suggested directions for investigation	
<input type="checkbox"/> Asking me questions	<input type="checkbox"/> Asked me questions	
<input type="checkbox"/> Letting me know what they know	<input type="checkbox"/> Let me know what they know	
<input type="checkbox"/> Sharing their ideas on what to do	<input type="checkbox"/> Shared their ideas on what to do	
<input type="checkbox"/> Showing the rest of the class something	<input type="checkbox"/> Showed the rest of the class something	
<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	
TEACHING APPROACHES		
Which ONE do you believe best describes the interaction in the first part of the lesson		
<input type="checkbox"/> Modelling	<input type="checkbox"/> Guiding	<input type="checkbox"/> Sharing
<input type="checkbox"/> Focussing	<input type="checkbox"/> Funnelling	<input type="checkbox"/> Convince Me
<input type="checkbox"/> Noticing	<input type="checkbox"/> Excavating	<input type="checkbox"/> Other:
Specify:		

SECTION 3: MIDDLE OF THE LESSON

PLANNED INTERACTION		ACTUAL INTERACTION	
Briefly describe the middle part of your lesson		Briefly describe what happened during the middle part of your lesson	
Approximate time:		Actual time:	
Circle the mark that best represents the relative involvement 		Circle the mark that best represents the relative involvement 	
Planned interaction Choose ONE statement that best characterizes what YOU will be doing		Actual interaction Choose ONE statement that best characterizes what YOU did.	
<input type="checkbox"/>	Explaining to students who need help	<input type="checkbox"/>	Explained to students who needed help
<input type="checkbox"/>	Moving around asking questions	<input type="checkbox"/>	Moved around asking questions
<input type="checkbox"/>	Moving around answering questions	<input type="checkbox"/>	Moved around answering questions
<input type="checkbox"/>	Teaching a small group (High teacher involvement)	<input type="checkbox"/>	Taught small group (High teacher involvement)
<input type="checkbox"/>	Teaching a small group (Low teacher involvement)	<input type="checkbox"/>	Taught a small group (Low teacher involvement)
<input type="checkbox"/>	Working with a small group answering questions	<input type="checkbox"/>	Worked with a small group answering questions
<input type="checkbox"/>	Other:	<input type="checkbox"/>	Other:
Planned interaction Choose ONE statement that best characterizes what the STUDENTS will be doing		Actual interaction Choose ONE statement that best characterizes what the STUDENTS did.	
<input type="checkbox"/>	Working on practice examples	<input type="checkbox"/>	Worked on practice examples
<input type="checkbox"/>	Working by themselves to solve the problem(s)	<input type="checkbox"/>	Worked by themselves to solve the problem(s)
<input type="checkbox"/>	Working in a group to solve the problem(s)	<input type="checkbox"/>	Worked in a group to solve the problem(s)
<input type="checkbox"/>	Making or showing something with materials	<input type="checkbox"/>	Made or showed something with materials
<input type="checkbox"/>	Discussing with other students how to solve the problem(s)	<input type="checkbox"/>	Discussed with other students how to solve the problem(s)
<input type="checkbox"/>	Other:	<input type="checkbox"/>	Other:
TEACHING APPROACHES			
Which ONE do you believe best describes the interaction in the middle part of the lesson			
<input type="checkbox"/>	Modelling	<input type="checkbox"/>	Guiding
<input type="checkbox"/>	Focussing	<input type="checkbox"/>	Sharing
<input type="checkbox"/>	Noticing	<input type="checkbox"/>	Funnelling
<input type="checkbox"/>		<input type="checkbox"/>	Excavating
<input type="checkbox"/>		<input type="checkbox"/>	Convince Me
<input type="checkbox"/>		<input type="checkbox"/>	Other:
Specify:			

SECTION 4: END OF THE LESSON

PLANNED INTERACTION		ACTUAL INTERACTION	
Briefly describe the end of your lesson		Briefly describe what happened at the end of your lesson	
Approximate time:		Actual time:	
Circle the mark that best represents the relative involvement		Circle the mark that best represents the relative involvement	
Planned interaction Choose ONE statement that best characterizes what YOU will be doing		Actual interaction Choose ONE statement that best characterizes what YOU did	
<input type="checkbox"/>	Correcting students work	<input type="checkbox"/>	Corrected students work
<input type="checkbox"/>	Summarizing what was learnt	<input type="checkbox"/>	Summarized what was learnt
<input type="checkbox"/>	Commenting on explanations by students	<input type="checkbox"/>	Commented on explanations by students
<input type="checkbox"/>	Using students responses to build understanding	<input type="checkbox"/>	Used students responses to build understanding
<input type="checkbox"/>	Helping students understand the maths	<input type="checkbox"/>	Helped students understand the maths
<input type="checkbox"/>	Making links and connections	<input type="checkbox"/>	Made links and connections
<input type="checkbox"/>	Other:	<input type="checkbox"/>	Other:
Planned interaction Choose ONE statement that best characterizes what the STUDENTS will be doing		Actual interaction Choose ONE statement that best characterizes what the STUDENTS did.	
<input type="checkbox"/>	Listening to explanations by other students	<input type="checkbox"/>	Listened to explanations by other students
<input type="checkbox"/>	Listening to explanations by you	<input type="checkbox"/>	Listened to explanations by you
<input type="checkbox"/>	Talking to or showing others what they've done	<input type="checkbox"/>	Talked to or showed others what they've done
<input type="checkbox"/>	Other:	<input type="checkbox"/>	Other:
TEACHING APPROACHES			
Which ONE do you believe best describes the interaction in the last part of the lesson			
<input type="checkbox"/>	Modelling	<input type="checkbox"/>	Guiding
<input type="checkbox"/>	Focussing	<input type="checkbox"/>	Funnelling
<input type="checkbox"/>	Noticing	<input type="checkbox"/>	Excavating
<input type="checkbox"/>		<input type="checkbox"/>	Sharing
<input type="checkbox"/>		<input type="checkbox"/>	Convince Me
<input type="checkbox"/>		<input type="checkbox"/>	Other:
Specify:			
OVERALL EFFECTIVENESS OF THE LESSON			
		Reasons:	

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TEACHER INTENTIONS SURVEY TECHNICAL REPORT

Teacher Intentions Survey (TIS) Initial Data: Frequencies

An example of the Teacher Intentions Survey data, TIS 1 (the results from the first TIS data collection) is presented in this technical report.

Table 1 Teacher Intentions Survey One (TIS 1) - Sample size for each Survey Item

Survey Items	N	
	Valid	Missing
Total time of lesson	184	224
Part of the day	165	243
Day of the week	180	228
Strand	187	221
Lesson structure	183	225
Mathematical content	185	223
Time breakdown	173	235
Basis of group selection	132	276
Beginning planned description	188	220
Approximate time of beginning of lesson	185	223
Beginning planned relative involvement	183	225
Beginning planned teacher interaction	186	222
Beginning planned student interaction	186	222
Beginning teaching approaches	178	230
Beginning actual description	183	225
Beginning actual time	155	253
Beginning actual relative involvement	171	237
Beginning actual teacher interaction	183	225
Beginning actual student interaction	182	226
Middle planned description	187	221
Approximate time of middle part of lesson	178	230
Middle planned relative involvement	181	227
Middle planned teacher interaction	187	221
Middle planned student interaction	187	221
Middle teaching approaches	181	227
Middle actual description	180	228
Middle actual time	143	265
Middle actual relative involvement	174	234
Middle actual teacher interaction	185	223
Middle actual student interaction	184	224
End planned description	188	220
Approximate time of end part of lesson	177	231
End planned relative involvement	181	227
End planned teacher interaction	187	221
End planned student interaction	186	222
End teaching approaches	177	231
End actual description	174	234
End actual time	128	280
End actual relative involvement	165	243

N: total number of participants. 'N' will vary over time, depending on the composition of staff of research schools.

Valid: the number of participants (staff) from research schools who completed the task.

Missing: the number of participants (staff) from research schools who did not complete the task. Note: not all participants (staff) were expected to complete all tasks.

Teacher Intentions Survey One (TIS 1): Frequency Tables for Each part of the Survey

Table 2

Total time of lesson in minutes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	60	97	23.8	52.7	52.7
	45	18	4.4	9.8	62.5
	50	23	5.6	12.5	75.0
	30	7	1.7	3.8	78.8
	90	4	1.0	2.2	81.0
	80	2	.5	1.1	82.1
	40	19	4.7	10.3	92.4
	55	6	1.5	3.3	95.7
	70	3	.7	1.6	97.3
	65	2	.5	1.1	98.4
	13	1	.2	.5	98.9
	14	1	.2	.5	99.5
	35	1	.2	.5	100.0
	Total	184	45.1	100.0	
Missing	System	224	54.9		
Total		408	100.0		

Table 3

Part of the day

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	first session after recess	102	25.0	61.8	61.8
	session before lunch	12	2.9	7.3	69.1
	first session of the morning	16	3.9	9.7	78.8
	second session of the morning (10-11)	17	4.2	10.3	89.1
	first session after lunch	12	2.9	7.3	96.4
	Late afternoon	2	.5	1.2	97.6
	Recess through to lunch	3	.7	1.8	99.4
	9	1	.2	.6	100.0
	Total	165	40.4	100.0	
Missing	System	243	59.6		
Total		408	100.0		

Table 4

Day of the week

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Monday	57	14.0	31.7	31.7
	Tuesday	59	14.5	32.8	64.4
	Wednesday	27	6.6	15.0	79.4
	Thursday	23	5.6	12.8	92.2
	Friday	14	3.4	7.8	100.0
	Total	180	44.1	100.0	
Missing	System	228	55.9		
Total		408	100.0		

Table 5

Strand

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Number	119	29.2	63.6	63.6
	Space	30	7.4	16.0	79.7
	Measurement	28	6.9	15.0	94.7
	Chance & Data	10	2.5	5.3	100.0
	Total	187	45.8	100.0	
Missing	System	221	54.2		
Total		408	100.0		

Table 6

Lesson structure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	whole,small,whole	107	26.2	58.5	58.5
	whole, roving	56	13.7	30.6	89.1
	small groups only	8	2.0	4.4	93.4
	whole	3	.7	1.6	95.1
	whole/small/whole & whole roving	2	.5	1.1	96.2
	small/roving/small	1	.2	.5	96.7
	whole/groups	2	.5	1.1	97.8
	13	2	.5	1.1	98.9
	14	2	.5	1.1	100.0
	Total	183	44.9	100.0	
Missing	System	225	55.1		
Total		408	100.0		

Table 7

Mathematical Content

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5	2	0.5	1.1	1.1
	13	1	0.2	0.5	1.6
	21	2	0.5	1.1	2.7
	23	1	0.2	0.5	3.2
	Number, process + - x /	7	1.7	3.8	7.0
	Number, ordering/sequencing	1	0.2	0.5	7.6
	Number, problem solving	8	2.0	4.3	11.9
	Number, identify, recognise, know	6	1.5	3.2	15.1
	108	1	0.2	0.5	15.7
	Number, predict, estimate, check	1	0.2	0.5	16.2
	Number, order of operations (BODMAS)	1	0.2	0.5	16.8
	Number, explore, discuss strategies	2	0.5	1.1	17.8
	Number, counting, counting on	8	2.0	4.3	22.2
	Number, rounding up/down	1	0.2	0.5	22.7
	115	1	0.2	0.5	23.2
	117	1	0.2	0.5	23.8
	Number, comparing	2	0.5	1.1	24.9
	119	1	0.2	0.5	25.4
	123	1	0.2	0.5	25.9
	126	2	0.5	1.1	27.0
	127	6	1.5	3.2	30.3
	Measurement, informal units/equipment	1	0.2	0.5	30.8
	Measurement, standard units/equipment	5	1.2	2.7	33.5
	Measurement, predict, estimate, check	2	0.5	1.1	34.6
	Measurement, reviewing, revising	1	0.2	0.5	35.1
	318	1	0.2	0.5	35.7
	Chance & Data, problem solving	1	0.2	0.5	36.2
	Chance & Data, identify, recognise, know	1	0.2	0.5	36.8
	Chance & Data, collect, describe	3	0.7	1.6	38.4
	Place value, problem solving	2	0.5	1.1	39.5
	Place value, identify, recognise, know	3	0.7	1.6	41.1
	512	1	0.2	0.5	41.6
	523	1	0.2	0.5	42.2
	704	1	0.2	0.5	42.7
705	1	0.2	0.5	43.2	
Pattern, identify, recognise, know	2	0.5	1.1	44.3	
Pattern, reproduce, create	1	0.2	0.5	44.9	
Shape, identify, recognise, know	6	1.5	3.2	48.1	
Shape, reproduce, create	2	0.5	1.1	49.2	
808	6	1.5	3.2	52.4	
Shape, reviewing, revising	1	0.2	0.5	53.0	
818	3	0.7	1.6	54.6	
1104	1	0.2	0.5	55.1	

Table continued next page

Table 7 continued

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Time, identify, recognise, know	9	2.2	4.9	60.0
	Map/location/position, language, describing	5	1.2	2.7	62.7
	Map/location/position, using coordinates	2	0.5	1.1	63.8
	1304	1	0.2	0.5	64.3
	1324	1	0.2	0.5	64.9
	Graph, reproduce, create	1	0.2	0.5	65.4
	1415	1	0.2	0.5	65.9
	1418	1	0.2	0.5	66.5
	1422	2	0.5	1.1	67.6
	1501	1	0.2	0.5	68.1
	1504	1	0.2	0.5	68.6
	1505	2	0.5	1.1	69.7
	Fractions, identify, recognise, know	2	0.5	1.1	70.8
	1508	4	1.0	2.2	73.0
	1515	1	0.2	0.5	73.5
	1526	3	0.7	1.6	75.1
	Money, identify, recognise, know	8	2.0	4.3	79.5
	1709	1	0.2	0.5	80.0
	1713	1	0.2	0.5	80.5
	1721	1	0.2	0.5	81.1
	Seasons, months, identify, recognise, know	1	0.2	0.5	81.6
	1924	2	0.5	1.1	82.7
	2004	1	0.2	0.5	83.2
	2005	1	0.2	0.5	83.8
	2018	1	0.2	0.5	84.3
	2025	1	0.2	0.5	84.9
	2105	6	1.5	3.2	88.1
	2108	1	0.2	0.5	88.6
	Multiplication, array concept	2	0.5	1.1	89.7
	2127	1	0.2	0.5	90.3
	Subtraction, problem solving	2	0.5	1.1	91.4
	2306	2	0.5	1.1	92.4
	2307	1	0.2	0.5	93.0
	2308	1	0.2	0.5	93.5
	2311	2	0.5	1.1	94.6
	2318	1	0.2	0.5	95.1
2321	4	1.0	2.2	97.3	
2323	4	1.0	2.2	99.5	
2327	1	0.2	0.5	100.0	
Total	185	45.34314	100		
Missing	System	223	54.65686		
Total		408	100		

Table 8

Time breakdown (see codes in the body of the report)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10/25/10	1	.2	.6	.6
	10/20/10	3	.7	1.7	2.3
	117	1	.2	.6	2.9
	121	19	4.7	11.0	13.9
	122	2	.5	1.2	15.0
	123	1	.2	.6	15.6
	131	25	6.1	14.5	30.1
	132	4	1.0	2.3	32.4
	133	1	.2	.6	32.9
	141	15	3.7	8.7	41.6
	142	2	.5	1.2	42.8
	151	6	1.5	3.5	46.2
	212	2	.5	1.2	47.4
	221	10	2.5	5.8	53.2
	222	8	2.0	4.6	57.8
	231	17	4.2	9.8	67.6
	232	21	5.1	12.1	79.8
	241	15	3.7	8.7	88.4
	242	3	.7	1.7	90.2
	252	1	.2	.6	90.8
	262	1	.2	.6	91.3
	321	2	.5	1.2	92.5
	331	2	.5	1.2	93.6
	342	1	.2	.6	94.2
	421	1	.2	.6	94.8
	431	1	.2	.6	95.4
	1131	1	.2	.6	96.0
1211	1	.2	.6	96.5	
1221	1	.2	.6	97.1	
2121	2	.5	1.2	98.3	
2211	2	.5	1.2	99.4	
2313	1	.2	.6	100.0	
	Total	173	42.4	100.0	
Missing	System	235	57.6		
Total		408	100.0		

Table 9

Basis of group selection

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Mixed ability	47	11.5	35.6	35.6
	Near ability	56	13.7	42.4	78.0
	Like needs	22	5.4	16.7	94.7
	9	1	.2	.8	95.5
	10	1	.2	.8	96.2
	Multiple boxes	5	1.2	3.8	100.0
	Total	132	32.4	100.0	
Missing	System	276	67.6		
Total		408	100.0		

Table 10

Beginning planned description

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Can't tell	1	.2	.5	.5
	6	1	.2	.5	1.1
	Teacher describes activity, instructs	4	1.0	2.1	3.2
	Teacher models activity	11	2.7	5.9	9.0
	Teacher discusses, explains, links, guides	9	2.2	4.8	13.8
	Teacher & Students describe activity/instruct	1	.2	.5	14.4
	Teacher & Students model activity	4	1.0	2.1	16.5
	Teacher & Students discuss, explain, link, guide	51	12.5	27.1	43.6
	Teacher & Students problem solve	3	.7	1.6	45.2
	Teacher & Students play a game	13	3.2	6.9	52.1
	Teacher & Students practise, develop skills/vocab	4	1.0	2.1	54.3
	Teacher & Students predict, estimate	1	.2	.5	54.8
	Teacher & Students review, assess, reflect, share	2	.5	1.1	55.9
	Teacher & Students investigate/discover	1	.2	.5	56.4
	Students describe activity, instruct	1	.2	.5	56.9
	Students discuss, explain, link, guide	4	1.0	2.1	59.0
	Students play a game	12	2.9	6.4	65.4
	Students practice, develop skills/vocab	7	1.7	3.7	69.1
	Students investigate, discover	2	.5	1.1	70.2
	114	1	.2	.5	70.7
	Teacher & Students demonstrate prior knowledge	26	6.4	13.8	84.6
Teacher & Students brainstorm	3	.7	1.6	86.2	
Students follow a set of instructions	1	.2	.5	86.7	
students demonstrate prior knowledge	25	6.1	13.3	100.0	
Total	188	46.1	100.0		
Missing	System	220	53.9		
Total		408	100.0		

Table 11

Approximate time of beginning of lesson

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5 minutes	16	3.9	8.6	8.6
	10 minutes	73	17.9	39.5	48.1
	15 minutes	58	14.2	31.4	79.5
	20 minutes	31	7.6	16.8	96.2
	25 minutes	4	1.0	2.2	98.4
	30 minutes	1	.2	.5	98.9
	40 minutes	1	.2	.5	99.5
	10	1	.2	.5	100.0
	Total	185	45.3	100.0	
Missing	System	223	54.7		
Total		408	100.0		

Table 12

Beginning planned relative involvement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	90/10% student/teacher involvement	11	2.7	6.0	6.0
	80/20% student/teacher involvement	24	5.9	13.1	19.1
	70/30% student/teacher involvement	22	5.4	12.0	31.1
	60/40% student/teacher involvement	14	3.4	7.7	38.8
	50/50% student/teacher involvement	55	13.5	30.1	68.9
	40/60% student/teacher involvement	13	3.2	7.1	76.0
	30/70% student/teacher involvement	25	6.1	13.7	89.6
	20/80% student/teacher involvement	12	2.9	6.6	96.2
	10/90% student/teacher involvement	7	1.7	3.8	100.0
	Total	183	44.9	100.0	
Missing	System	225	55.1		
Total		408	100.0		

Table 13

Beginning planned teacher interaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Instructing students what to do	10	2.5	5.4	5.4
	Showing students how to do something	25	6.1	13.4	18.8
	Making links and connections	31	7.6	16.7	35.5
	Reviewing previous work	28	6.9	15.1	50.5
	Answering questions	4	1.0	2.2	52.7
	Listening to students' suggestions	10	2.5	5.4	58.1
	Facilitating student to student interactions	9	2.2	4.8	62.9
	Posing a problem	23	5.6	12.4	75.3
	Finding out what students know	37	9.1	19.9	95.2
	Multiple boxes	5	1.2	2.7	97.8
	Introducing a game and asking questions	1	.2	.5	98.4
	13	1	.2	.5	98.9
	14	2	.5	1.1	100.0
	Total	186	45.6	100.0	
Missing	System	222	54.4		
Total		408	100.0		

Table 14

Beginning planned student interaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Listening to instructions	16	3.9	8.6	8.6
	Listening to explanations	18	4.4	9.7	18.3
	Suggesting directions for investigation	4	1.0	2.2	20.4
	Asking me questions	1	.2	.5	21.0
	Letting me know what they know	91	22.3	48.9	69.9
	Sharing their ideas on what to do	28	6.9	15.1	84.9
	Showing the rest of the class something	11	2.7	5.9	90.9
	Multiple boxes	4	1.0	2.2	93.0
	Answering questions	1	.2	.5	93.5
	Playing or observing game	5	1.2	2.7	96.2
	Doing activities	1	.2	.5	96.8
	18	4	1.0	2.2	98.9
	20	1	.2	.5	99.5
	23	1	.2	.5	100.0
Total	186	45.6	100.0		
Missing	System	222	54.4		
Total		408	100.0		

Table 15

Beginning teaching approaches

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Modelling	35	8.6	19.7	19.7
	Focussing	44	10.8	24.7	44.4
	Noticing	11	2.7	6.2	50.6
	Guiding	25	6.1	14.0	64.6
	Funneling	6	1.5	3.4	68.0
	Excavating	17	4.2	9.6	77.5
	Sharing	34	8.3	19.1	96.6
	Convince me	1	.2	.6	97.2
	Multiple boxes	2	.5	1.1	98.3
	Exercising Brain	1	.2	.6	98.9
	15	1	.2	.6	99.4
	17	1	.2	.6	100.0
	Total	178	43.6	100.0	
Missing	System	230	56.4		
Total		408	100.0		

Table 16

Beginning actual description

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Can't tell	2	.5	1.1	1.1
	6	1	.2	.5	1.6
	Teacher describes activity/ instructs	4	1.0	2.2	3.8
	Teacher models activity	11	2.7	6.0	9.8
	Teacher discusses/explains/links/ guides	6	1.5	3.3	13.1
	Teacher & students describe activity/instruct	5	1.2	2.7	15.8
	Teacher & students discuss, explain, link, guide	51	12.5	27.9	43.7
	Teacher & students problem solve	3	.7	1.6	45.4
	Teacher & students play a game	13	3.2	7.1	52.5
	Teacher & students practise, develop skills/vocab	6	1.5	3.3	55.7
	Teacher & students predict & estimate	1	.2	.5	56.3
	Teacher & students review, assess, reflect, share	3	.7	1.6	57.9
	Teacher & students investigate and discover	1	.2	.5	58.5
	Students discuss, explain, link & guide	7	1.7	3.8	62.3
	Students play a game	11	2.7	6.0	68.3
	Students practise, develop skills/vocab	8	2.0	4.4	72.7
	Students predict/estimate	1	.2	.5	73.2
	Students investigate, discover	1	.2	.5	73.8
	114	1	.2	.5	74.3
	Teacher & students demonstrate prior knowledge	26	6.4	14.2	88.5
213	1	.2	.5	89.1	
students demonstrate prior knowledge	20	4.9	10.9	100.0	
Total	183	44.9	100.0		
Missing	System	225	55.1		
Total		408	100.0		

Table 17

Beginning actual time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5 minutes	10	2.5	6.5	6.5
	10 minutes	44	10.8	28.4	34.8
	15 minutes	57	14.0	36.8	71.6
	20 minutes	27	6.6	17.4	89.0
	25 minutes	13	3.2	8.4	97.4
	30 minutes	3	.7	1.9	99.4
	40 minutes	1	.2	.6	100.0
	Total	155	38.0	100.0	
Missing	System	253	62.0		
Total		408	100.0		

Table 18

Beginning actual relative involvement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	90/10% student/teacher involvement	10	2.5	5.8	5.8
	80/20% student/teacher involvement	26	6.4	15.2	21.1
	70/30% student/teacher involvement	17	4.2	9.9	31.0
	60/40% student/teacher involvement	18	4.4	10.5	41.5
	50/50% student/teacher involvement	43	10.5	25.1	66.7
	40/60% student/teacher involvement	19	4.7	11.1	77.8
	30/70% student/teacher involvement	22	5.4	12.9	90.6
	20/80% student/teacher involvement	10	2.5	5.8	96.5
	10/90% student/teacher involvement	6	1.5	3.5	100.0
	Total	171	41.9	100.0	
Missing	System	237	58.1		
Total		408	100.0		

Table 19

Beginning actual teacher interaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Instructed students what to do	14	3.4	7.7	7.7
	Showed students how to do something	33	8.1	18.0	25.7
	Made links and connections	31	7.6	16.9	42.6
	Reviewed previous work	20	4.9	10.9	53.6
	Answered questions	3	.7	1.6	55.2
	Listened to students' suggestions	13	3.2	7.1	62.3
	Facilitated student to student interactions	6	1.5	3.3	65.6
	Posing a problem	13	3.2	7.1	72.7
	Found out what students know	41	10.0	22.4	95.1
	Multiple boxes	6	1.5	3.3	98.4
	Questioned	2	.5	1.1	99.5
	14	1	.2	.5	100.0
	Total	183	44.9	100.0	
Missing	System	225	55.1		
Total		408	100.0		

Table 20

Beginning actual student interaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Listened to instructions	11	2.7	6.0	6.0
	Listened to explanations	17	4.2	9.3	15.4
	Suggested directions for investigation	6	1.5	3.3	18.7
	Asked me questions	4	1.0	2.2	20.9
	Let me know what they know	86	21.1	47.3	68.1
	Shared their ideas on what to do	33	8.1	18.1	86.3
	Showed the rest of the class something	10	2.5	5.5	91.8
	Estimating/measuring	1	.2	.5	92.3
	Multiple boxes	3	.7	1.6	94.0
	Answered questions	1	.2	.5	94.5
	Played or observed game	4	1.0	2.2	96.7
	Did activities	2	.5	1.1	97.8
	18	1	.2	.5	98.4
	19	1	.2	.5	98.9
	20	1	.2	.5	99.5
	21	1	.2	.5	100.0
	Total	182	44.6	100.0	
Missing	System	226	55.4		
Total		408	100.0		

Table 21

Middle planned description

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Can't tell	3	.7	1.6	1.6
	Teacher models activity	2	.5	1.1	2.7
	Teacher discusses/explains/links /guides	2	.5	1.1	3.7
	Teacher problem solves	1	.2	.5	4.3
	16	1	.2	.5	4.8
	Teacher & students can't tell	2	.5	1.1	5.9
	Teacher & students describe activity/instruct	1	.2	.5	6.4
	Teacher & students discuss, explain, link, guide	9	2.2	4.8	11.2
	Teacher & students problem solve	20	4.9	10.7	21.9
	Teacher & students play a game	3	.7	1.6	23.5
	Teacher & students practise, develop skills/vocab	35	8.6	18.7	42.2
	Teacher & students review, assess, reflect, share	3	.7	1.6	43.9
	Teacher & students investigate and discover	4	1.0	2.1	46.0
	Students do something	2	.5	1.1	47.1
	31	2	.5	1.1	48.1
	Students model activity	1	.2	.5	48.7
	Students discuss, explain, link & guide	4	1.0	2.1	50.8
	Students problem solve	30	7.4	16.0	66.8
	Students play a game	9	2.2	4.8	71.7
	Students practise, develop skills/vocab	48	11.8	25.7	97.3
Students investigate, discover	4	1.0	2.1	99.5	
313	1	.2	.5	100.0	
Total	187	45.8	100.0		
Missing	System	221	54.2		
Total		408	100.0		

Table 22

Approximate time of middle part of lesson

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5 minutes	1	.2	.6	.6
	10 minutes	6	1.5	3.4	3.9
	15 minutes	6	1.5	3.4	7.3
	20 minutes	41	10.0	23.0	30.3
	25 minutes	21	5.1	11.8	42.1
	30 minutes	57	14.0	32.0	74.2
	35 minutes	9	2.2	5.1	79.2
	40 minutes	28	6.9	15.7	94.9
	45 minutes	5	1.2	2.8	97.8
	10	3	.7	1.7	99.4
	25	1	.2	.6	100.0
	Total	178	43.6	100.0	
Missing	System	230	56.4		
Total		408	100.0		

Table 23

Middle planned relative involvement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	90/10% student/teacher involvement	32	7.8	17.7	17.7
	80/20% student/teacher involvement	55	13.5	30.4	48.1
	70/30% student/teacher involvement	39	9.6	21.5	69.6
	60/40% student/teacher involvement	15	3.7	8.3	77.9
	50/50% student/teacher involvement	21	5.1	11.6	89.5
	40/60% student/teacher involvement	4	1.0	2.2	91.7
	30/70% student/teacher involvement	6	1.5	3.3	95.0
	20/80% student/teacher involvement	8	2.0	4.4	99.4
	24	1	.2	.6	100.0
	Total	181	44.4	100.0	
Missing	System	227	55.6		
Total		408	100.0		

Table 24

Middle planned teacher interaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Explaining to students who need help	16	3.9	8.6	8.6
	Moving around asking questions	61	15.0	32.6	41.2
	Moving around answering questions	21	5.1	11.2	52.4
	Teaching a small group (high teacher involvement)	43	10.5	23.0	75.4
	Teaching a small group (low teacher involvement)	29	7.1	15.5	90.9
	Working with a small group answering questions	2	.5	1.1	92.0
	Instructing students	2	.5	1.1	93.0
	Multiple boxes	7	1.7	3.7	96.8
	questioning	2	.5	1.1	97.9
	Interaction between students/teachers	2	.5	1.1	98.9
	16	1	.2	.5	99.5
	17	1	.2	.5	100.0
	Total	187	45.8	100.0	
Missing	System	221	54.2		
Total		408	100.0		

Table 25

Middle planned student interaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Working on practice examples	33	8.1	17.6	17.6
	Working by themselves to solve the problem(s)	38	9.3	20.3	38.0
	Working in a group to solve the problem(s)	42	10.3	22.5	60.4
	Making or showing something with materials	47	11.5	25.1	85.6
	Discussing with other students how to solve the problem(s)	12	2.9	6.4	92.0
	Partners	2	.5	1.1	93.0
	Multiple boxes	8	2.0	4.3	97.3
	Playing a game	3	.7	1.6	98.9
	13	1	.2	.5	99.5
	14	1	.2	.5	100.0
	Total	187	45.8	100.0	
Missing	System	221	54.2		
Total		408	100.0		

Table 26

Middle teaching approaches

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Modelling	14	3.4	7.7	7.7
	Focussing	20	4.9	11.0	18.8
	Noticing	27	6.6	14.9	33.7
	Guiding	67	16.4	37.0	70.7
	Funneling	4	1.0	2.2	72.9
	Excavating	16	3.9	8.8	81.8
	Sharing	16	3.9	8.8	90.6
	Convince me	5	1.2	2.8	93.4
	Roving	1	.2	.6	93.9
	Multiple boxes	8	2.0	4.4	98.3
	12	1	.2	.6	98.9
	13	1	.2	.6	99.4
	14	1	.2	.6	100.0
	Total	181	44.4	100.0	
Missing	System	227	55.6		
Total		408	100.0		

Table 27

Middle actual description

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Can't tell	3	.7	1.7	1.7
	11	1	.2	.6	2.2
	Teacher discusses/explains/links /guides	3	.7	1.7	3.9
	14	2	.5	1.1	5.0
	16	1	.2	.6	5.6
	21	1	.2	.6	6.1
	Teacher & students describe activity/instruct	1	.2	.6	6.7
	Teacher & students discuss, explain, link, guide	14	3.4	7.8	14.4
	Teacher & students problem solve	25	6.1	13.9	28.3
	Teacher & students play a game	3	.7	1.7	30.0
	Teacher & students practise, develop skills/vocab	37	9.1	20.6	50.6
	Teacher & students review, assess, reflect, share	2	.5	1.1	51.7
	Teacher & students investigate and discover	4	1.0	2.2	53.9
	Students do something	1	.2	.6	54.4
	Students discuss, explain, link & guide	4	1.0	2.2	56.7
	Students problem solve	23	5.6	12.8	69.4
	Students play a game	7	1.7	3.9	73.3
	Students practise, develop skills/vocab	41	10.0	22.8	96.1
	Students review, assess, reflect, share	3	.7	1.7	97.8
	Students investigate, discover	3	.7	1.7	99.4
Students follow a set of instructions	1	.2	.6	100.0	
Total	180	44.1	100.0		
Missing	System	228	55.9		
Total		408	100.0		

Table 28

Middle actual time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10 minutes	3	.7	2.1	2.1
	15 minutes	12	2.9	8.4	10.5
	20 minutes	14	3.4	9.8	20.3
	25 minutes	31	7.6	21.7	42.0
	30 minutes	27	6.6	18.9	60.8
	35 minutes	15	3.7	10.5	71.3
	40 minutes	28	6.9	19.6	90.9
	45 minutes	9	2.2	6.3	97.2
	10	3	.7	2.1	99.3
	14	1	.2	.7	100.0
	Total	143	35.0	100.0	
Missing	System	265	65.0		
Total		408	100.0		

Table 29

Middle actual relative involvement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	90/10% student/teacher involvement	27	6.6	15.5	15.5
	80/20% student/teacher involvement	44	10.8	25.3	40.8
	70/30% student/teacher involvement	36	8.8	20.7	61.5
	60/40% student/teacher involvement	13	3.2	7.5	69.0
	50/50% student/teacher involvement	26	6.4	14.9	83.9
	40/60% student/teacher involvement	7	1.7	4.0	87.9
	30/70% student/teacher involvement	13	3.2	7.5	95.4
	20/80% student/teacher involvement	8	2.0	4.6	100.0
	Total	174	42.6	100.0	
Missing	System	234	57.4		
Total		408	100.0		

Table 30

Middle actual teacher interaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Explaining to students who need help	30	7.4	16.2	16.2
	Moving around asking questions	45	11.0	24.3	40.5
	Moving around answering questions	25	6.1	13.5	54.1
	Teaching a small group (high teacher involvement)	44	10.8	23.8	77.8
	Teaching a small group (low teacher involvement)	17	4.2	9.2	87.0
	Working with a small group answering questions	3	.7	1.6	88.6
	Other	2	.5	1.1	89.7
	Instructing students	1	.2	.5	90.3
	Discussing/modelling	1	.2	.5	90.8
	Multiple boxes	9	2.2	4.9	95.7
	questioning	3	.7	1.6	97.3
	Interaction between students/teachers	2	.5	1.1	98.4
	16	1	.2	.5	98.9
	17	1	.2	.5	99.5
	18	1	.2	.5	100.0
Total	185	45.3	100.0		
Missing	System	223	54.7		
Total		408	100.0		

Table 31

Middle actual student interaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Working on practice examples	28	6.9	15.2	15.2
	Working by themselves to solve the problem(s)	34	8.3	18.5	33.7
	Working in a group to solve the problem(s)	39	9.6	21.2	54.9
	Making or showing something with materials	46	11.3	25.0	79.9
	Discussing with other students how to solve the problem(s)	17	4.2	9.2	89.1
	Partners	1	.2	.5	89.7
	Discussing/modelling	4	1.0	2.2	91.8
	Multiple boxes	10	2.5	5.4	97.3
	13	1	.2	.5	97.8
	14	1	.2	.5	98.4
	15	1	.2	.5	98.9
	16	1	.2	.5	99.5
	38	1	.2	.5	100.0
	Total	184	45.1	100.0	
Missing	System	224	54.9		
Total		408	100.0		

Table 32

End planned description

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Can't tell	1	.2	.5	.5
	1	1	.2	.5	1.1
	Teacher discusses/explains/link s/guides	1	.2	.5	1.6
	Teacher reviews, assesses, reflects, shares	2	.5	1.1	2.7
	Teacher & students do something	1	.2	.5	3.2
	Teacher & students describe activity/instruct	1	.2	.5	3.7
	Teacher & students discuss, explain, link, guide	18	4.4	9.6	13.3
	Teacher & students problem solve	1	.2	.5	13.8
	Teacher & students play a game	3	.7	1.6	15.4
	Teacher & students review, assess, reflect, share	77	18.9	41.0	56.4
	Students model activity	1	.2	.5	56.9
	Students discuss, explain, link & guide	3	.7	1.6	58.5
	Students problem solve	1	.2	.5	59.0
	Students play a game	1	.2	.5	59.6
	Students practise, develop skills/vocab	6	1.5	3.2	62.8
	Students review, assess, reflect, share	69	16.9	36.7	99.5
	Students follow a set of instructions	1	.2	.5	100.0
Total	188	46.1	100.0		
Missing	System	220	53.9		
Total		408	100.0		

Table 33

Approximate time of end part of lesson

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5 minutes	30	7.4	16.9	16.9
	10 minutes	96	23.5	54.2	71.2
	15 minutes	36	8.8	20.3	91.5
	20 minutes	14	3.4	7.9	99.4
	30 minutes	1	.2	.6	100.0
	Total	177	43.4	100.0	
Missing	System	231	56.6		
Total		408	100.0		

Table 34

End planned relative involvement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	90/10% student/teacher involvement	13	3.2	7.2	7.2
	80/20% student/teacher involvement	48	11.8	26.5	33.7
	70/30% student/teacher involvement	42	10.3	23.2	56.9
	60/40% student/teacher involvement	15	3.7	8.3	65.2
	50/50% student/teacher involvement	43	10.5	23.8	89.0
	40/60% student/teacher involvement	8	2.0	4.4	93.4
	30/70% student/teacher involvement	9	2.2	5.0	98.3
	20/80% student/teacher involvement	2	.5	1.1	99.4
	10/90% student/teacher involvement	1	.2	.6	100.0
	Total	181	44.4	100.0	
Missing	System	227	55.6		
Total		408	100.0		

Table 35

End planned teacher interaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Correcting students work	8	2.0	4.3	4.3
	Summarizing what was learnt	31	7.6	16.6	20.9
	Commenting on explanations by students	34	8.3	18.2	39.0
	Using students' responses to build understanding	73	17.9	39.0	78.1
	Helping students understand the maths	10	2.5	5.3	83.4
	Making links and connections	27	6.6	14.4	97.9
	Roaming/assisting/guiding	1	.2	.5	98.4
	9	1	.2	.5	98.9
	Multiple choices	2	.5	1.1	100.0
	Total	187	45.8	100.0	
Missing	System	221	54.2		
Total		408	100.0		

Table 36

End planned student interaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Listening to explanations by other students	66	16.2	35.5	35.5
	Listening to explanations by you	10	2.5	5.4	40.9
	Talking to or showing others what they've done	100	24.5	53.8	94.6
	Completing set task	1	.2	.5	95.2
	Play a game	3	.7	1.6	96.8
	Listening & sharing knowledge	2	.5	1.1	97.8
	Responding to teacher's questions	1	.2	.5	98.4
	Multiple choices	2	.5	1.1	99.5
	13	1	.2	.5	100.0
	Total	186	45.6	100.0	
Missing	System	222	54.4		
Total		408	100.0		

Table 37

End teaching approaches

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Modelling	5	1.2	2.8	2.8
	Focussing	13	3.2	7.3	10.2
	Noticing	11	2.7	6.2	16.4
	Guiding	13	3.2	7.3	23.7
	Funneling	5	1.2	2.8	26.6
	Excavating	6	1.5	3.4	29.9
	Sharing	105	25.7	59.3	89.3
	Convince me	10	2.5	5.6	94.9
	Reflection	5	1.2	2.8	97.7
	Multiple boxes	3	.7	1.7	99.4
	Managing	1	.2	.6	100.0
	Total	177	43.4	100.0	
Missing	System	231	56.6		
Total		408	100.0		

Table 38

End actual description

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Can't tell	3	.7	1.7	1.7
	11	1	.2	.6	2.3
	Teacher discusses/explains/link s/guides	1	.2	.6	2.9
	Teacher reviews, assesses, reflects, shares	4	1.0	2.3	5.2
	Teacher & students do something	1	.2	.6	5.7
	Teacher & students describe activity/instruct	1	.2	.6	6.3
	Teacher & students discuss, explain, link, guide	21	5.1	12.1	18.4
	Teacher & students play a game	3	.7	1.7	20.1
	Teacher & students practise, develop skills/vocab	1	.2	.6	20.7
	Teacher & students review, assess, reflect, share	68	16.7	39.1	59.8
	Students model activity	1	.2	.6	60.3
	Students discuss, explain, link & guide	3	.7	1.7	62.1
	Students problem solve	2	.5	1.1	63.2
	Students practise, develop skills/vocab	4	1.0	2.3	65.5
	Students review, assess, reflect, share	60	14.7	34.5	100.0
Total	174	42.6	100.0		
Missing	System	234	57.4		
Total		408	100.0		

Table 39

End actual time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5 minutes	29	7.1	22.7	22.7
	10 minutes	46	11.3	35.9	58.6
	15 minutes	34	8.3	26.6	85.2
	20 minutes	13	3.2	10.2	95.3
	25 minutes	5	1.2	3.9	99.2
	15	1	.2	.8	100.0
	Total	128	31.4	100.0	
Missing	System	280	68.6		
Total		408	100.0		

Table 40

End actual relative involvement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	90/10% student/teacher involvement	12	2.9	7.3	7.3
	80/20% student/teacher involvement	39	9.6	23.6	30.9
	70/30% student/teacher involvement	31	7.6	18.8	49.7
	60/40% student/teacher involvement	22	5.4	13.3	63.0
	50/50% student/teacher involvement	27	6.6	16.4	79.4
	40/60% student/teacher involvement	11	2.7	6.7	86.1
	30/70% student/teacher involvement	13	3.2	7.9	93.9
	20/80% student/teacher involvement	8	2.0	4.8	98.8
	10/90% student/teacher involvement	2	.5	1.2	100.0
	Total	165	40.4	100.0	
Missing	System	243	59.6		
Total		408	100.0		